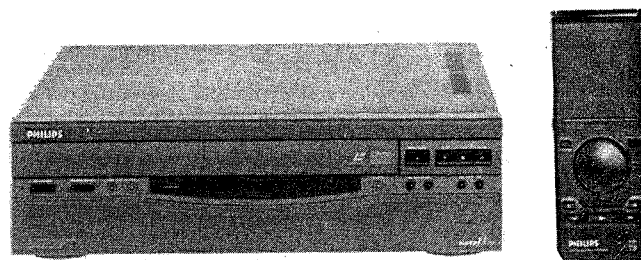


Service
Service
Service



Service Manual

THE LDP600WS IS A MATCHLINE MULTI
LASER DISC PLAYER



- Plays all Laser Disc, CD Video and CD-Audio discs.
- World-system PAL/NTSC operation.
- Exceptional video fidelity.
- High-performance Bitstream audio D/A conversion.
- Enhanced remote control with variable-speed search.
- Favourite Track Selection F.T.S.
- 20 track or chapter programming.
- Two pairs of audio and video outputs.
- High-quality inverse LCD display.
- Personal presets.
- Trade mode for dealer demonstrations.

INTRODUCTION DATE: B-PERIODE 1991

The optical pick-up assy is operating according to the 3-beam tracking principle.

Type number : KHS-130A
Code number : 4822 691 30237
Remote control : RC600LDP
Code number : 4822 218 10412
Loading assy complete : 4822 691 30261

Remark

The last pages of this manual are containing additional safety instructions and Handling procedures for ESD-sensitive components.

"Pour votre sécurité, ces documents
doivent être utilisés par des spécia-
listes agréés, seuls habilités à réparer
votre appareil en panne".

(S)

Varning!
Osynlig laserstrålning när denna del är öppnad och
spärren är urkopplad. Betakta ej strålen.

(DK)

Advarsell
Usynlig laserstrålning ved åbning når sikkerhedsafbrydere
er ude af funktion. Undgå udsættelse for stråling.

(SF)

Varoitus!
Laite sisältää laserdiodin, joka lähettää näkymätöntä
silmille vaarallista lasersäteilyä.

(GB)

Safety regulations require that the set be restored
to its original condition and that parts which are
identical with those specified be used.

**CLASS 1
LASER PRODUCT**

3122 110 03420



PHILIPS

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I. CAUTION

LASER NOTE:

DANGER — Invisible laser radiation when open. **AVOID DIRECT EXPOSURE TO BEAM.**

CAUTION — Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION — The use of optical instruments with this product will increase eye hazard.

LASER BEAM RADIATION SPOT

Laser Diode Properties

Material: Ga-Al-As

Wavelength: 770 — 800 nm (25°C)

Laser Output: Continuous Wave max. 0.4 mW

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

Varo!

Avattaessa ja suojalukitus ohitettaessa olet alttiina näkömättömälle lasersäteilylle. Älä katso säteeseen.

Varning!

Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

ESD



All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD).

Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.

Keep components and tools also at this potential.

Serial Nbr.

MZXXXXXXXXXXXX

Service Change Code

Year Code

Week Code

Lot Nbr.

Continued Nbr.



CAUTION: DO NOT REMOVE SCREWS, SEE MARKING ON BOTTOM.
ATTENTION: NE PAS ENLEVER LES COUVERCLE. VOIR LES MARQUAGES EN BAS.

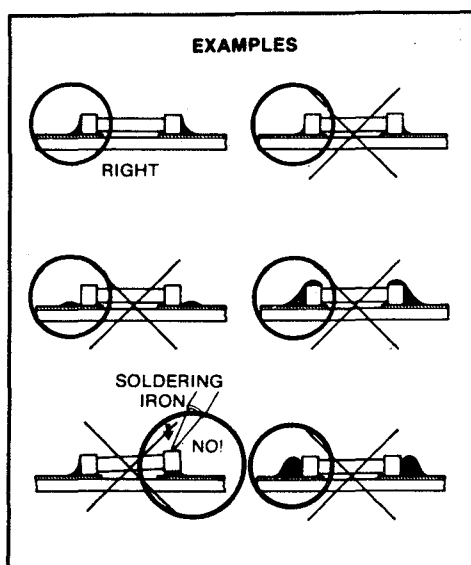
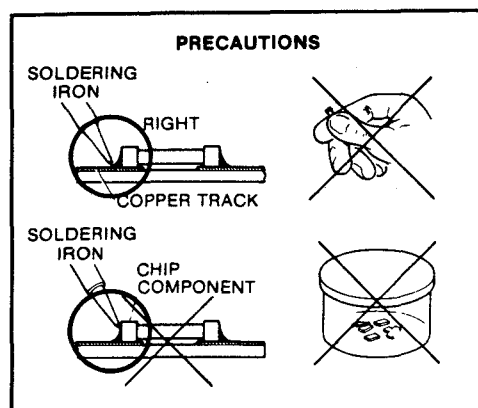
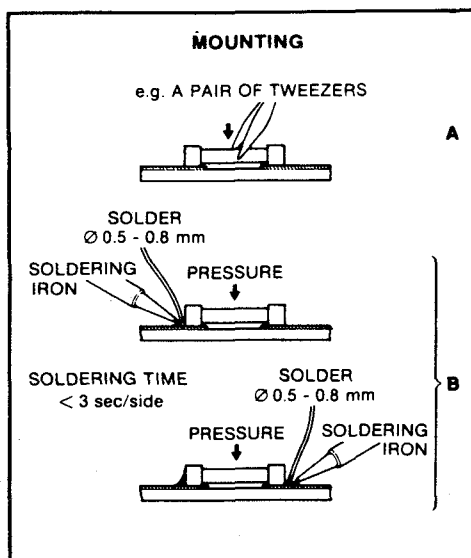
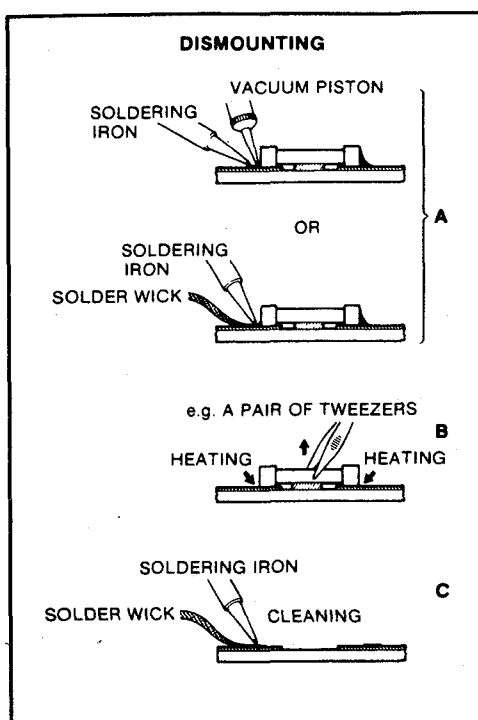
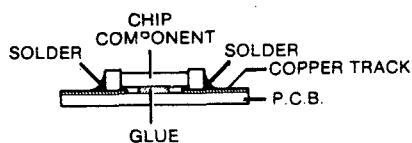
**CLASS 1
LASER PRODUCT**

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED TECHNICIAN.
ATTENTION: AFIN DE PREVENIR UN CHOC ELECTRIQUE NE PAS ENLEVER LE COUVERCLE (OU L'ARRIERE). IL NE SE TROUVE A L'INTERIEUR AUCUNE PIECE POUVANT ETRE REPARÉE PAR L'USAGER. S'ADRESSER AU TECHNICIEN COMPETENT.

MOUNTING SMD'S

CAUTION: AFTER REMOVING CHIP TYPE COMPONENTS, DO NOT REUSE THEM.

Chip devices are not heatproof and shockproof. Use caution when handling them.



II. SPECIFICATIONS

● FORMAT

System (or Type):

Optical videodisc system
complies with MCA/Philips
specifications

Usable disc: (PAL only)

8 cm CD: 20 Min.
12 cm CD: 70 Min.
CDV single: Video 6 Min.
Audio 20 Min.

30 cm LD (CLV) disc:
60 Min./side

30 cm LD (CAV) disc:
36 Min./side

20 cm LD (CLV) disc:
20 Min./side

20 cm LD (CAV) disc:
16 Min./side

Usable disc: (NTSC Only)

8 cm CD: 20 Min.
12 cm CD: 70 Min.
CDV single: Video 5 Min.
Audio 20 Min.

30 cm LD (CLV) disc:
60 Min./side

30 cm LD (CAV) disc:
30 Min./side

20 cm LD (CLV) disc:
20 Min./side

20 cm LD (CAV) disc:
14 Min./side

● CONNECTIONS:

Video:

Video Output:

1 Vp-p (75-ohms load, sync.
negative) cinch connector

A/V Euroconnector:

Full scart

Audio:

Analogue output:

200 mVeff (1 kHz, 40%),

Digital output:

200 mVeff (1 kHz, -20 dB)

Stereo or 2-channel individual, stereo sockets.

Digital signal characteristics

Frequency response:

20 Hz to 20 kHz ± 0.2 dB

Signal-to-noise ratio:

96 dB

Dynamic range:

96 dB

Distortion rate:

0.003% (1 kHz, -20 dB)

Digital signal output:

Optical x 1

● GENERAL

Power requirements:

110 V/120 V/220 V/240 V AC,
50/60 Hz

Power consumption:

59 W

Weight:

12 kg

Dimensions (W x H x D):

420 x 135 x 404 mm

Operational temperature:

+5°C to 35°C.

Humidity range:

5 to 90% (No condensation)

Safety requirements

IEC 65

(BS415 for U.K.)

● ACCESSORIES

Remote control Transmitter

Size "AA" battery x 2

Scart cable x 1

Audio cable x 1

Video cable x 1

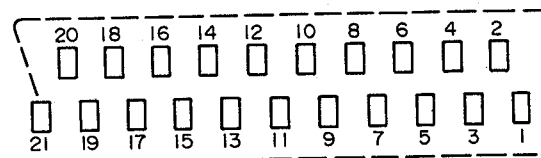
● OTHERS

Auto audio digital output:

When playing discs having a
digitally-recorded audio signal,
audio reproduction circuit is
automatically changed to
the audio digital circuit.

Specifications and design subject to change without notice.

Euroconnector pin assignments



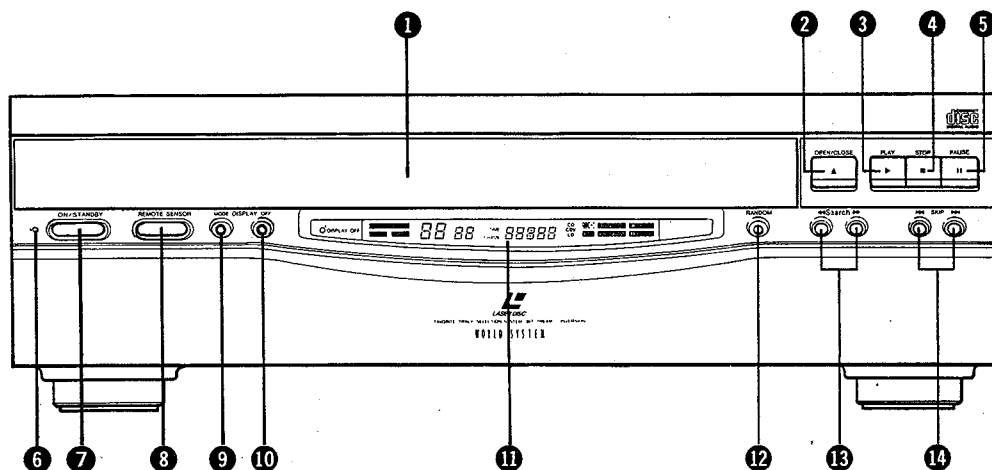
- Pin 1: audio out (right)
- Pin 2: not connected
- Pin 3: audio out (left)
- Pin 4: audio earth
- Pin 5: blue earth
- Pin 6: not connected
- Pin 7: blue out
- Pin 8: player status
- Pin 9: green earth
- Pin 10: not connected
- Pin 11: green out
- Pin 12: not connected
- Pin 13: red earth
- Pin 14: not connected
- Pin 15: red out
- Pin 16: not connected
- Pin 17: CVBS earth
- Pin 18: RGB status earth
- Pin 19: CVBS out/RGB synch
- Pin 20: not connected
- Pin 21: socket earth

The right is reserved to change data if necessary

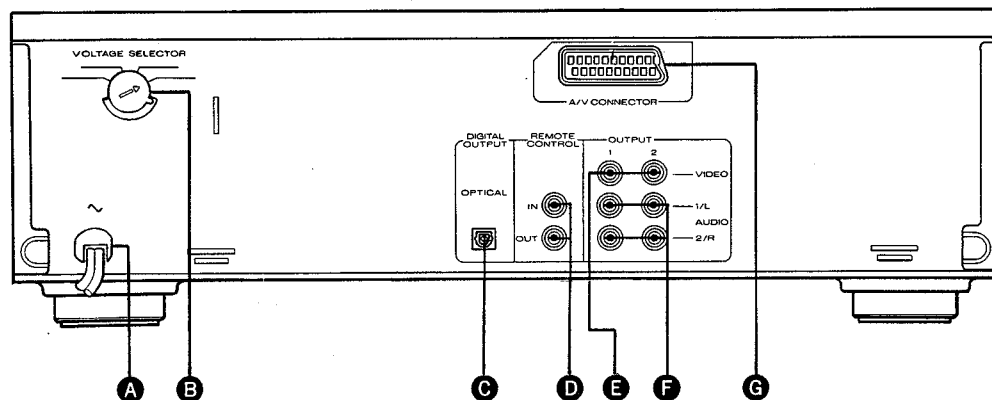
This CD Video player complies with radio interference requirements
as laid down in EC regulations.

III. CONNECTION AND CONTROLS

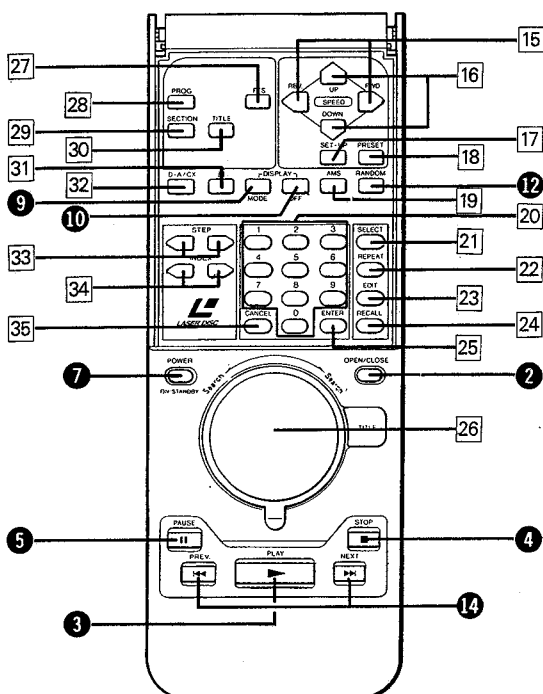
Front panel



Rear panel



Remote Control



1 DISC TRAY

Place a disc on the tray.

The tray slides out by pressing the OPEN/CLOSE (▲) button on the player or by pressing the OPEN/CLOSE on the remote control transmitter.

2 OPEN/CLOSE (▲) BUTTON

Press this button to open and close the disc tray.

When this button is pressed with the disc placed on the tray, the disc tray close, and the TOTAL TRACK/CHAP and TOTAL TIME appear on the display of the player while the TOTAL TRACK/CHAP. TOTAL TIME and music calendar are displayed on the monitor screen, then the player enters the stop mode.

However, if an LD with no TOC is loaded, playback will start automatically.

When this button is pressed during play, disc rotation stops and the disc tray will open. When this button is pressed with the disc tray open, the disc tray closes. While the disc tray is the opening or closing the CD, CDV or LD indicator flashes.

3 PLAY (▶) BUTTON

When this button is pressed after placing a disc on the disc tray, the disc slides into the player and play starts.

- Pressing this button in Stop mode starts play.
- Pressing this button during play moves the play position to the beginning of the chapter or track being played, and re-starts play from there.
- Pressing this button can also start program play.
- Pressing this button during playback in a mode other than normal Play mode causes normal Play mode to resume.

4 STOP (■) BUTTON

When this button is pressed during play, the disc rotation stops.

In the Stop mode, when more than 10 minutes have elapsed, the player enters the Standby mode automatically.

5 PAUSE (⏸) BUTTON

When this button is pressed during Play mode, play is stopped temporarily. To resume play, press the PLAY button, or the PAUSE button again.

6 STANDBY INDICATOR

When the AC cord is plugged into an AC outlet, the player enters the Standby mode (Normal status: If the disc tray is opened, it will be closed.), and this indicator lights.

When the STANDBY button is pressed, the indicator lights to show that the unit is in the Standby mode. It will go out when the power is turned ON.

7 ON/STANDBY BUTTON

When this button is pressed, the player enters the Standby mode and the STANDBY indicator lights up. (All the data stored in the memory are then erased.)

Pressing this Button and any of the OPEN/CLOSE (▲), PLAY (▶), STOP (■), PAUSE (⏸), SKIP (⏮, ⏭) buttons turns the power on.

Note: In the Stand-By mode, no operations other than the above are possible.

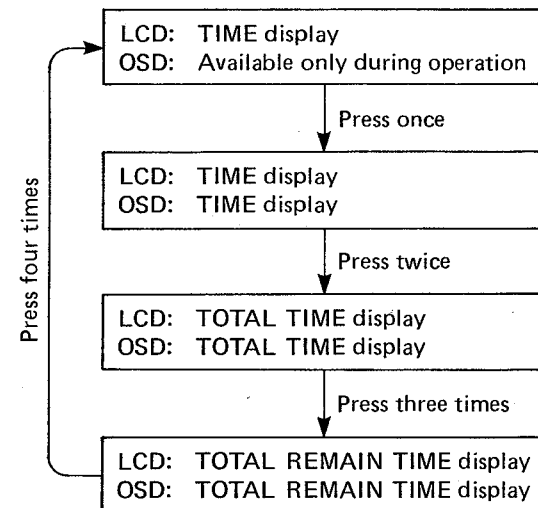
8 REMOTE SENSOR

This is the receiver for the signal transmitted from the remote control transmitter.

9 DISPLAY MODE BUTTON

This button is used to changed the contents of the Liquid Crystal Display (LCD) on the player and On-Screen Display (OSD) on the monitor screen.

Note: This function is effective only when Display ON/OFF is ON.



Displayed contents differ depending on the disc being played.

10 DISPLAY ON/OFF BUTTON

This button is used to cancel the Liquid Crystal Display (LCD) on the player.

11 MULTI-FUNCTION DISPLAY**12 RANDOM BUTTON**

Press this button to start random play.

(Effective only for CD, CDV-Single, and LD disc with TOC)

13 SEARCH BUTTONS

When one of these buttons is pressed and held down during Play mode, the player searches forward or backward.

- ▶▶ : Forward search.
- ◀◀ : Backward search.

The search speed varies in two steps. It is low for the first two seconds after the button is pressed, and then becomes high.

14 SKIP (⏮/⏭) BUTTONS

Press one of these buttons to skip to the beginning of a chapter or track.

- ▶▶: When this button is pressed during Play mode, the beginning of the next chapter or track is detected. When it is kept pressed, the chapter or track number is advanced continuously.

- ◀◀: When this button is pressed during Play mode, the beginning of the current chapter or track is detected. When it is kept pressed, the chapter or track number is reversed continuously.

A MAINS CORD**B VOLTAGE SELECTOR****C OPTICAL DIGITAL OUTPUT****D REMOTE CONTROL IN/OUT****E AUDIO OUTPUT 1, 2 L/R****F VIDEO OUTPUT 1, 2****G A/V CONNECTOR****Remote control**

Any other button than given below serves the same operation as does its corresponding one of a CDV player.

15 PLAY (REV./FWD) BUTTONS [CAV]

With these buttons you can determine the direction of play. You must then press on the REV./FWD keys to raise or lower the default speed of 1/4. This ranges from three times the normal speed to one frame per three seconds.

16 SPEED (UP/DOWN) SET BUTTONS [CAV]

When the power is switched ON the initial speed is 1/4 the normal speed.

With these buttons the speed can be raised or lowered in eight steps after first pressing one of the SPEED REV/FWD buttons.

17 SET-UP BUTTON**18 PRESET BUTTON****19 AMS (Auto Music Scan) BUTTON**

Press this button to start AMS play, or when entering the program for AMS play.

20 NUMBERED BUTTONS

Use these buttons when searching or programming chapters or tracks.

21 SELECT BUTTON

Press this button to recall the specific position you want to view and/or listen to (search operation).

22 REPEAT BUTTON

Use this button for repeat play.

23 EDIT BUTTON

With this function, an interval of four seconds will be left between tracks during play. It is convenient when recording from a disc to tape.

Press this button when entering the edit program.

24 RECALL BUTTON

Press this button to check the programmed contents.

25 ENTER BUTTON

Press this button to enter a program for programmed play.

26 SHUTTLE RING

When the shuttle ring is turned in the clockwise direction (to the right), the disc is fast-forwarded at twice the normal speed, 5-times the normal speed, 10-times the normal speed, or at high speed, depending on how far the ring is turned.

When the shuttle ring is turned in the counterclockwise direction (to the left), the disc is fast-reversed at twice the normal speed, 5-times the normal speed, 10-times the normal speed, or at high speed, depending on how far the ring is turned.

27 FTS BUTTON

This function allows you to store a program for each of your discs in semipermanent memory.

28 PROGRAM BUTTON

This button is used to program the desired chapters or tracks in a desired order (programmed play).

29 SECTION BUTTON

Use this button for a block repeat between points A and B. To stop the process, press the Cancel button.

30 TITLE BUTTON**31 I-II BUTTON (LD)**

If you wish to listen to only one audio channel, as in the case of a bilingual disc, press the I-II button to select the desired channel. Each press switches the selected channels as follows: 1/L → 2/R → 1/L and 2/R (stereo) → 1/L →

32 D-A/CX BUTTON

- The D-A/CX button allows to toggle between the digital sound and analog sound.
- Press the D-A/CX button on the remote control transmitter so that the CX indicator lights up. The CX system helps improve the audio S/N (Signal to Noise) ratio and expand its dynamic range.

33 STEP (REV./FWD) BUTTONS [CAV]

Press one of these buttons to freeze the picture. After this, each press of a button moves the pause frame step by step in either direction.

To cancel the pause picture, press the PLAY (▶) button.

34 INDEX (▲, ▼) BUTTONS

Press one of these buttons to activate an index skip operation with a CD or CDV on which the index numbers have been recorded.

35 CANCEL BUTTON

Use this button in the following cases.

- To cancel repeat play.
- To correct an entry made using the numeric buttons (only during programming). When this button is pressed again, the program mode will be cancelled.
- To cancel Programmed play.
- To cancel random play.
- To cancel A-B repeat.

IV. DISASSEMBLY PROCEDURES

A. TRAY ASSEMBLY REPLACEMENT PROCEDURES

DISMANTLING THE TRAY ASSEMBLY

1. Remove the top cover by extracting screws (A).
2. Insert the power plug into a power outlet, press the OPEN button to open the disc tray, then unplug the power plug.

Note: If tray assembly will not open, then perform the MANUAL TRAY OPENING PROCEDURES.

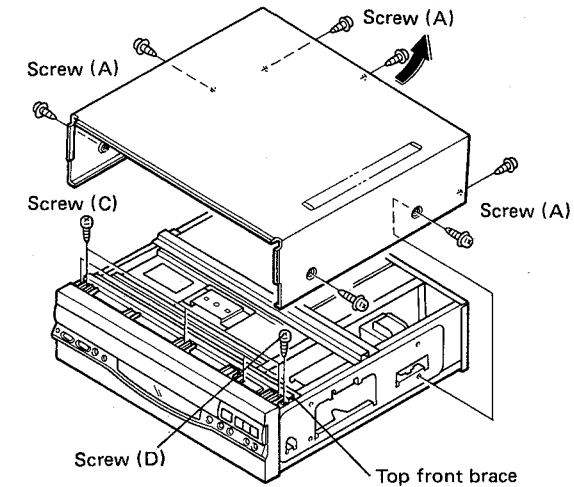


Fig. 1

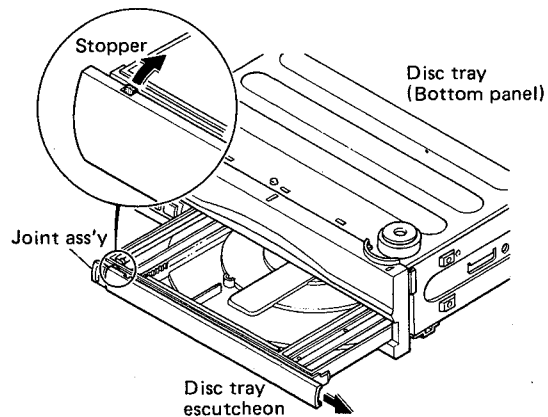


Fig. 2

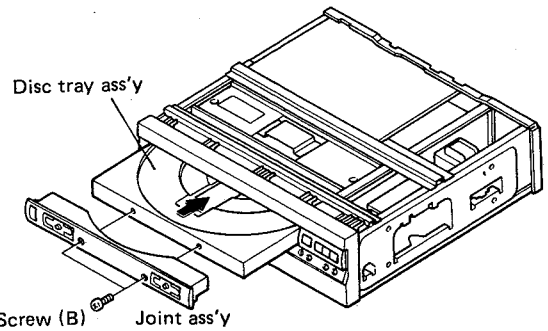


Fig. 3

3. Place the unit upside down, and remove the disc tray escutcheon by sliding it toward the right while pushing the stopper on the left end of the joint ass'y of disc tray using tweezers or a screwdriver. (Fig. 2)
4. Place the unit back to the normal position. Remove the joint ass'y from the disc tray by removing screws (B), and close the disc tray. (Fig. 3)
5. Remove the front panel by removing screws (C), and place the front panel, with the control keys facing upward, on a position so that it is not hit when the disc tray is opened. (Figs. 1 and 4)
6. Remove the top front brace by removing screws (D). (Fig. 1)

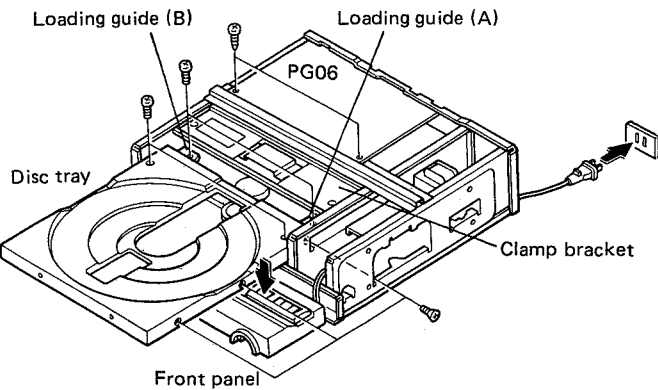


Fig. 4

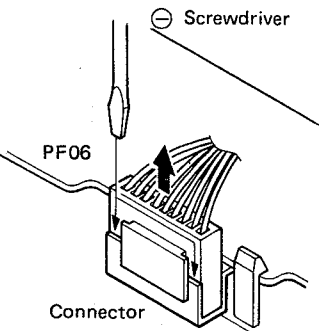


Fig. 5

7. Open the disc tray with the same procedure as step 2.

Note: When disconnecting the connectors (JF01, JF02) on the front assembly (PF06), draw out the connectors, undoing the stopper with a straight-edge screwdriver inserted as indicated by arrows in Fig. 5.

8. Remove the retaining screws from the loading guides (A) (B), and take out the disc tray together with the loading guides. (Figs. 4 and 6)

Note: The left loading guide (B) is not fixed on the tray. Therefore, when taking the tray out, be careful that the loading guide (B) is not disengaged from the tray. Should the loading guide become disengaged, set it in position so that the shaft of the Loading gear assembly is parallel with the disc tray edge. (Figs. 7 and 8)

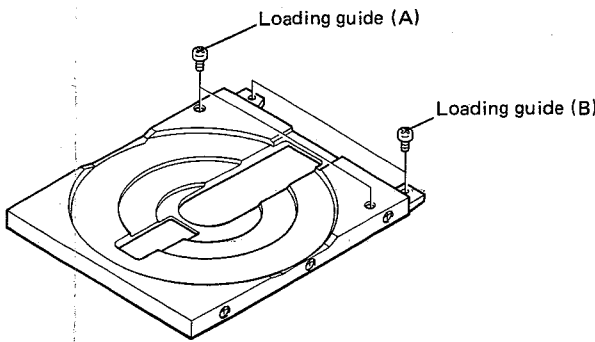


Fig. 6

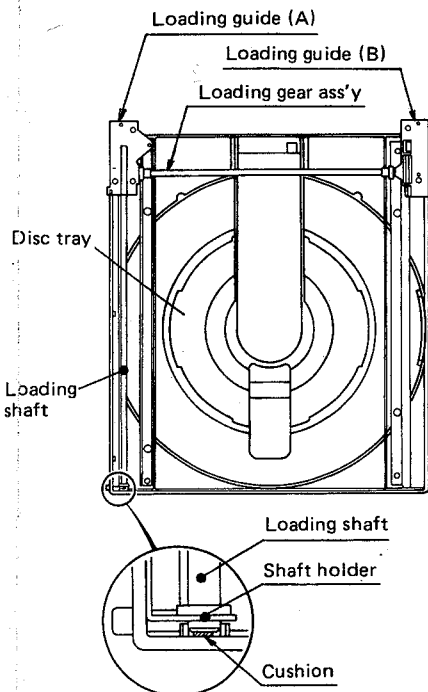


Fig. 7

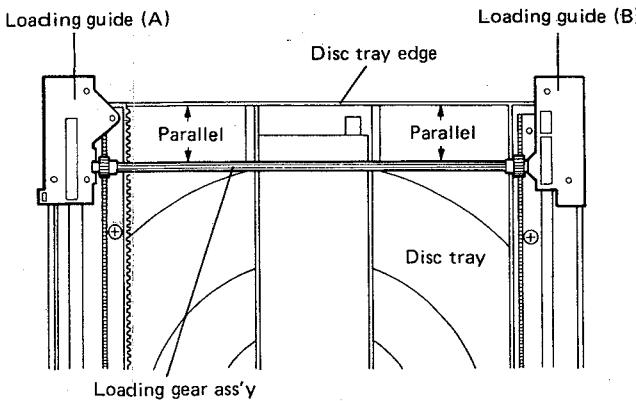


Fig. 8

B. MANUAL TRAY OPENING PROCEDURES

1. Remove the bottom plate. (Fig. 9)
2. Remove the fixing screws of the main assembly (P506) and the terminal fixing screws of the rear panel. (Fig. 9)
3. Remove the fixing clampers of the system control assembly (PU06).
4. Turn the gear (B) clockwise by inserting your finger through the rectangular hole on the side of the loading motor; the turntable will move down and the disc tray will open. (Fig. 10) When the disc tray comes out a little, it can be opened with your hand.

Note: Be careful not to deform the gear teeth, for this will cause abnormal noise during operation.

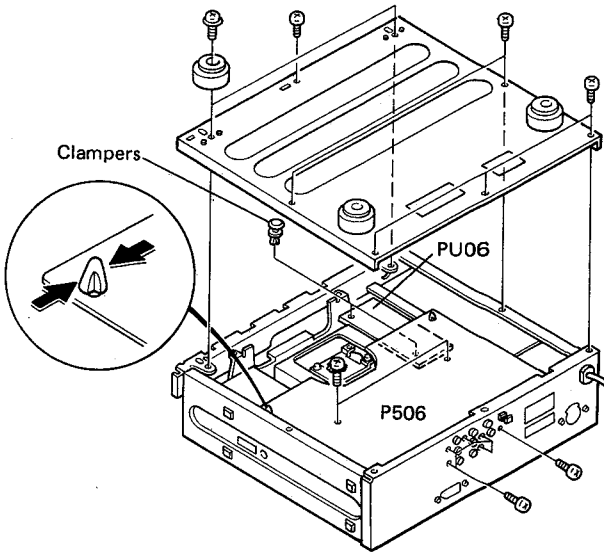


Fig. 9

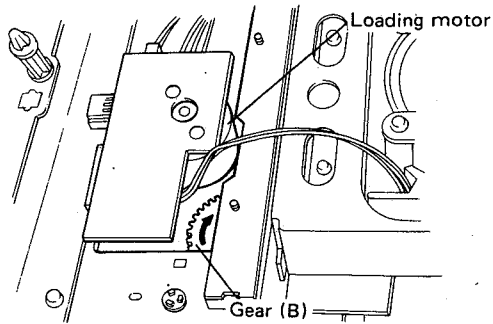


Fig. 10

C. ATTACHING THE TRAY ASSEMBLY

1. Turn the control cam clockwise until it stops. (Fig. 11)
2. Check that the marks (A) and the marks (B) are aligned properly.
 - If the marks (A) are not aligned properly, refer to "ATTACHING THE CONTROL CAM".
 - If the marks (B) are not aligned properly, remove the gear (A) and align them. Once the marks (B) are aligned, replace gear (A).

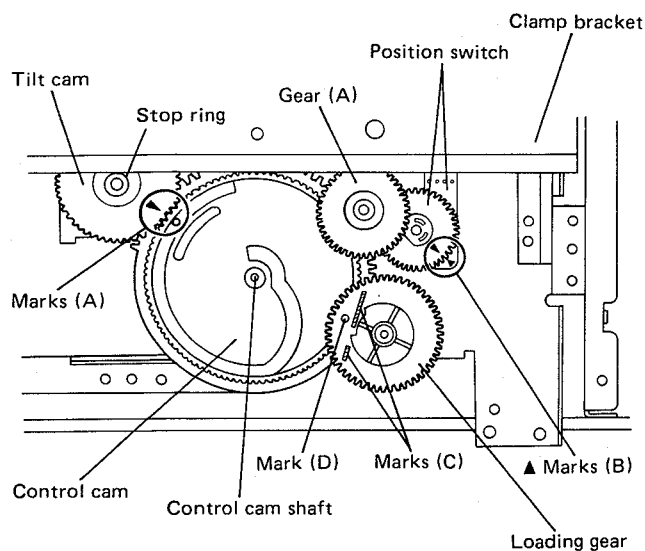


Fig. 11

3. Turn the control cam counterclockwise until it stops.
4. Set the loading gear so that the marks (C) on it are parallel with the front chassis or clamp bracket. (Fig. 12)

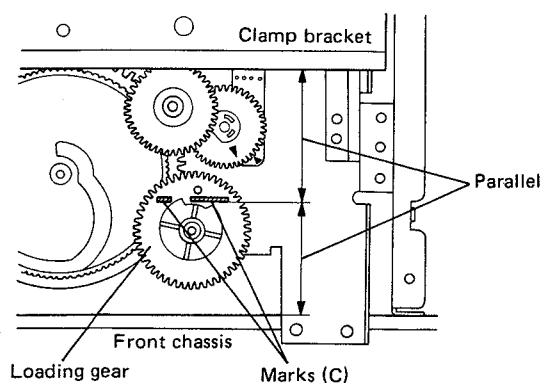


Fig. 12

5. With the loading guides (A) & (B) fully extended, mount the disc tray and loading guides on the chassis. (Fig. 13)
6. Check that the disc tray is inserted in parallel with the chassis.

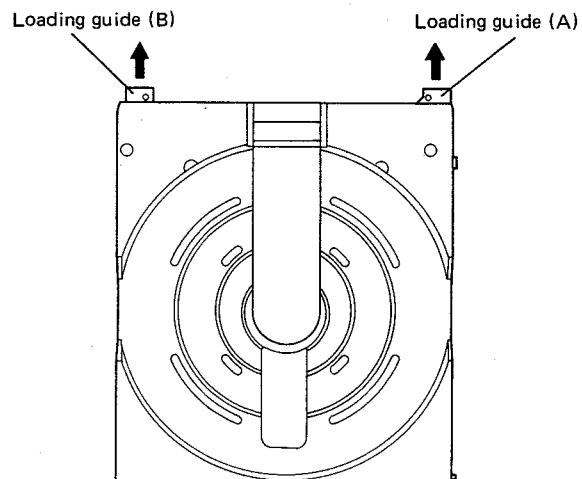


Fig. 13

7. With the disc tray in the fully open position, check that the marks (C) on the loading gear are parallel with the rear edge of the disc tray. (Fig. 14)

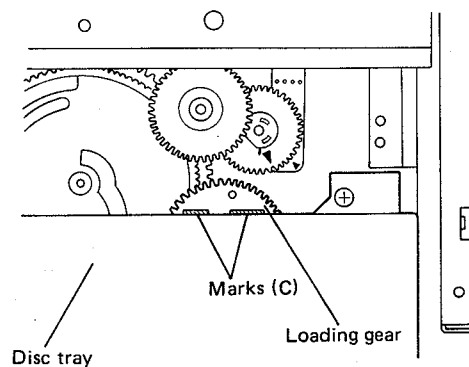


Fig. 14

8. Attach the loading guides (A) & (B) with screws (Figs. 4, 6), and push the disc tray into the loaded position.
9. Perform steps 1 through 6 of "DISMANTLING THE TRAY ASSEMBLY" in reverse order.

D. ATTACHING THE CONTROL CAM

In case you have removed the control cam, attach it following the procedure below.

1. Set the slide base drive shaft to the closest position to the control cam shaft. (Fig. 15)

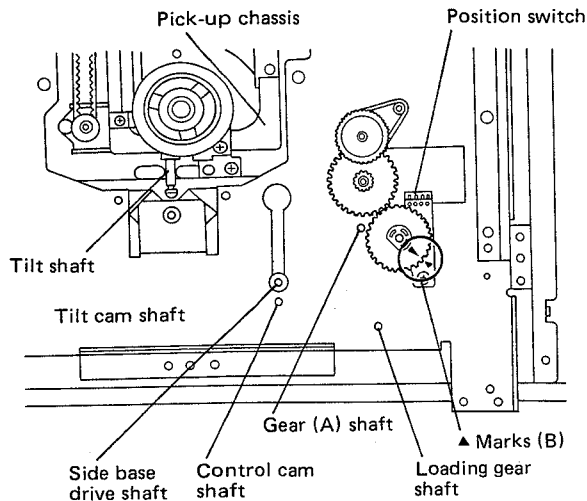


Fig. 15

2. Mount the control cam by passing the control cam's shaft through the hole on the center of the control cam and placing the slide base drive shaft into the guide groove on the back of the control cam, and secure the control cam with the washer. (Fig. 16)

In case it is difficult to insert the slide base drive shaft into the guide groove, move the slide base drive shaft back by 0.5 to 1 mm from the control cam shaft.

3. Turn the control cam clockwise until it stops. Retain the control cam in this position until the tilt cam, gear (A) and loading gear have been mounted. (Fig. 16)
4. Holding the tilt cam so that its mark points to the tilt shaft, mount the tilt cam by passing the tilt cam shaft through the cam hole. Then, lower the tilt cam to a position with which the tilt cam gear does not engage with the control cam gear, and turn the tilt cam counterclockwise until it stops. (Fig. 16)
Check that the tilt shaft is inserted into the guide groove on the tilt cam.

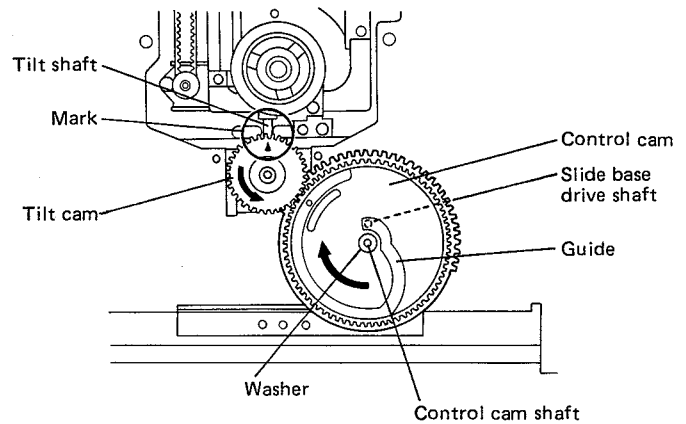


Fig. 16

5. Align the mark (A) on the control cam with the mark (A) on the tilt cam, and mount the E-clip on the tilt shaft. (Fig. 11) When the tilt cam is attached, the control cam may rotate counterclockwise due to the weight of the pick-up chassis. Return the control cam by turning it clockwise until it stops.
6. Align the mark (B) on the position switch as shown in Fig. 11 or Fig. 15.
7. Attach the gear (A) and mount the retaining ring. (Fig. 11)
8. Attach the loading gear so that its mark (D) points to the control cam shaft and mount the retaining ring. (Fig. 11)
9. Attach the tray assembly.

E. PICK-UP ASSEMBLY REPLACEMENT PROCEDURES

Use an ESD wrist strap when working around the unit, especially the LASER assembly.

1. Remove the top cover. (Fig. 1)
2. Insert the power plug into a power outlet, press the OPEN button to open the disc tray, then unplug the power plug.

Note: If tray assembly will not open then perform the MANUAL TRAY OPENING PROCEDURES.

3. Remove the RGB assembly (PG06). (Fig. 18)
4. Remove the fixing screws of the clamp bracket at both of its ends. (Fig. 17)
5. Force open the clamp bracket with a pointed instrument inserted between the clamp bracket (right side) and the mechanism chassis. Then, release the clamp bracket from a stopper (protrusion) of the mechanism chassis. (Fig. 17)
6. Force open the clamp bracket at its left side by hand, then release the clamp bracket from a stopper of the mechanism chassis, and detach it from the unit. (Fig. 17)

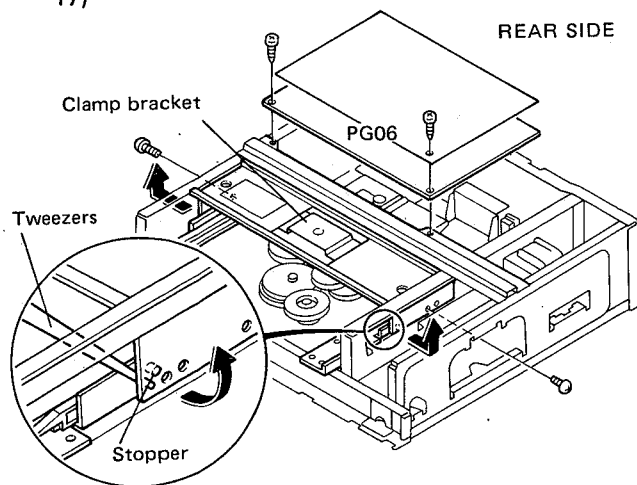


Fig. 17

7. Turn the slide motor drive gear with your finger to move the PICK-UP assembly until you can see it. (Fig. 18)
8. On the pick-up side, unlock the connector of the flexible wire by sliding the lock in the direction of the arrow, and disconnect the flexible wire. (Fig. 18)

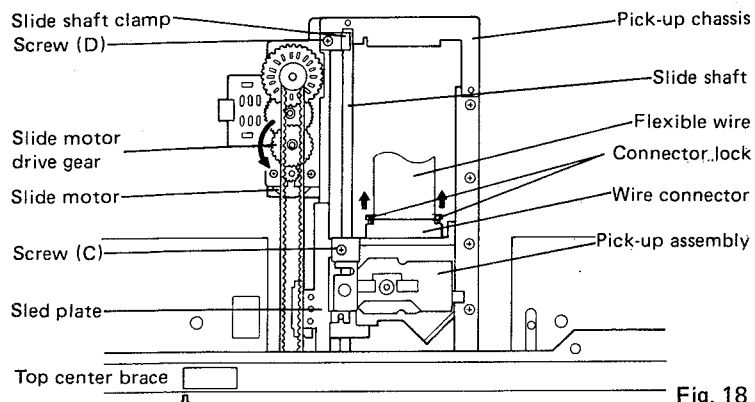


Fig. 18

9. Loosen the screw (E) which retains the slide shaft clamp from the center. (Fig. 19)
10. Remove the screw (C) which retains the sled plate and the screw (D) which retains the slide shaft clamp from the rear side. (Fig. 18)

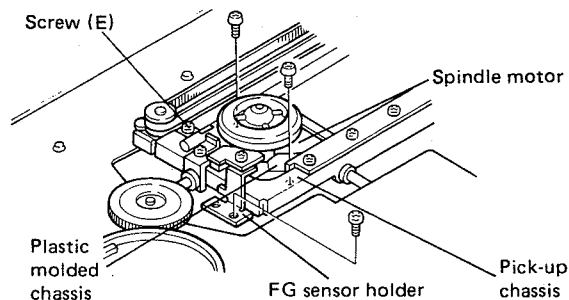


Fig. 19

11. Take out the slide shaft and PICK-UP assembly. (Fig. 20)
12. Replace with the new PICK-UP assembly, and reassemble the parts by reversing the procedure above.

Note: Be careful not to deform the pickup chassis during removal or installation.

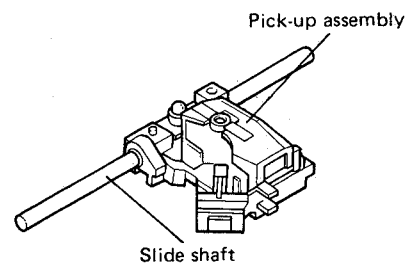


Fig. 20

Note: When the optical chassis 032M (see exploded view 2) in the service manual page 103) is deformed or damaged or when the plastic molded chassis 058M is broken, the complete mechanism has to be exchanged.

The reason for this is: The optical chassis and the plastic molded chassis are matched together with a special factory alignment method.

And cannot be carried out by service.

The code number for this complete mechanism is: 4822 691 30261.

F. SPINDLE MOTOR REPLACEMENT PROCEDURES

1. Perform steps 1 through 6 of "PICK-UP ASSEMBLY REPLACEMENT PROCEDURES."
2. Rotate the slide motor drive gear, and move the pick-up assembly to the rear panel side to permit the insertion of a hexagon wrench. (Fig. 18)
3. Loosen the hexagon socket head screw using a hexagon wrench, then draw out the turntable from the spindle motor shaft. (Fig. 21)
4. Remove the screws (F) installing the spindle motor to the plastic molded chassis. (Fig. 21)
5. Turn over the unit, then detach the bottom plate, the main assembly (P506) and system control assembly (PU06). (Fig. 9)
6. Disconnect CN1 on the loading motor assembly. (Fig. 22)
7. Remove the screws (G), then detach the guard plate and the spindle motor. (Fig. 22)
8. Replace the spindle motor with a new one, and reassemble by performing the above steps in reverse order.

Note: When installing the turntable to the spindle motor, follow the next "TURNTABLE INSTALLATION PROCEDURES."

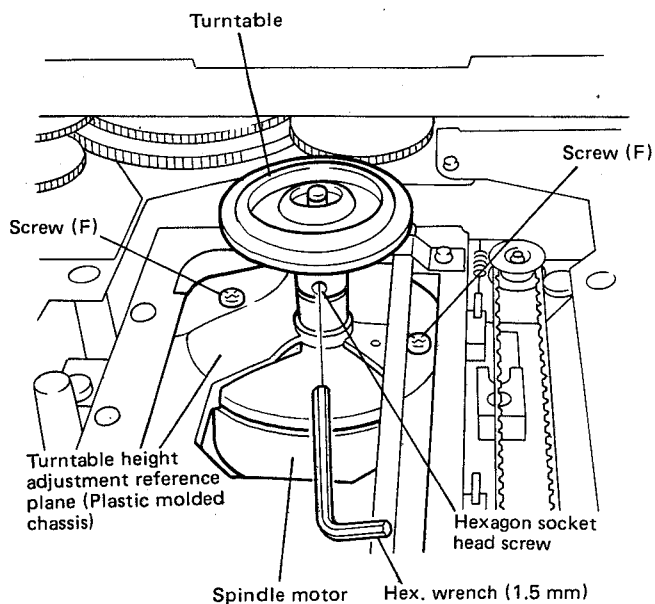


Fig. 21

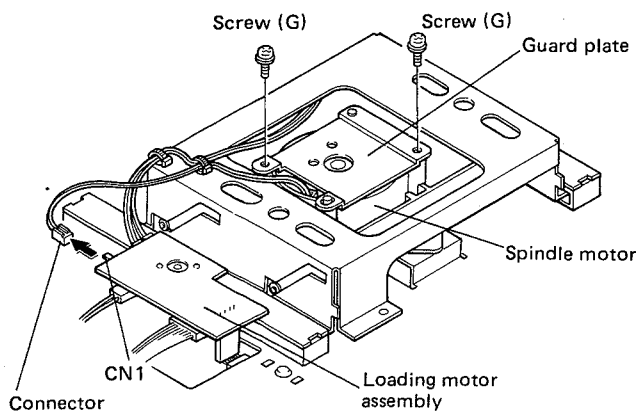


Fig. 22

G. TURNTABLE INSTALLATION PROCEDURES

1. Perform steps 4 through 8 of "SPINDLE MOTOR REPLACEMENT PROCEDURES" in reverse order, and fix the spindle motor to the plastic molded chassis by screws (F).
2. After full insertion of the turntable to the spindle motor shaft, keep the turntable 2–3 mm away from the bearing of the spindle motor shaft and tighten the hexagon socket head screw temporarily. (Fig. 23)
3. Place the turntable height adjusting device in close contact with the upper surface of the turntable in such a manner that its leg section comes above the height adjustment reference plane of the plastic molded chassis. (Figs. 21 and 24)
4. Loosen the hexagon socket head screw, and lower the turntable until the leg section of the height adjustment device comes into contact with the reference plane. Then, retighten the hexagon socket head screw securely. (Fig. 24)
5. Perform steps 1 through 6 of "PICK-UP ASSEMBLY REPLACEMENT PROCEDURES" in reverse order.

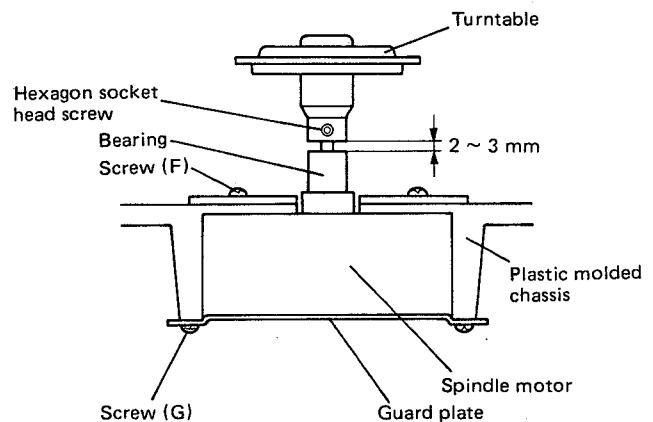


Fig. 23

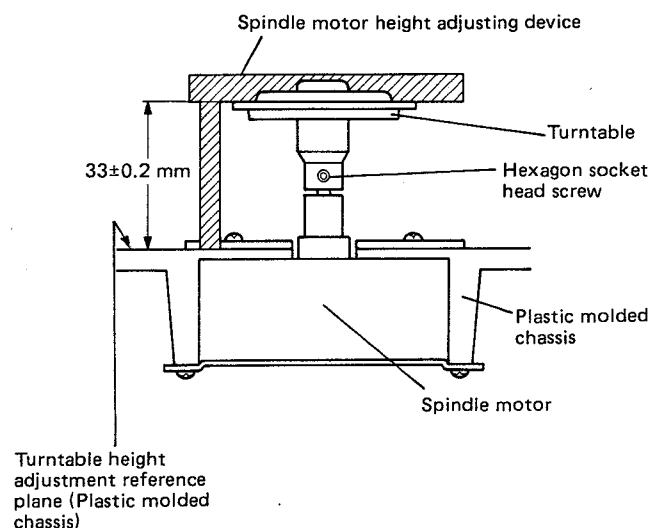


Fig. 24

V. ADJUSTMENT PROCEDURES

FIXTURES AND INSTRUMENTS REQUIRED FOR ADJUSTMENTS

- Small screwdriver
- Small Phillips head screwdriver
- Hexagon wrench (1.5 mm)
- Dual-trace oscilloscope (with delay)
 - Voltage range : 0.001 ~ 50 V/div.
 - Frequency range : DC ~ 50 MHz
 - Probes : 10:1, 1:1
- AF generator
- Frequency counter
 - Frequency range: 0 ~ 50 MHz, 8 digit readout
- LD test disc (PAL: IMS 1.0) (4822 397 30207)
- LD test disc (NTSC: MZ001) (4822 397 30244)
- CD test disc (Philips 5A) (4822 397 30096)
- Spindle motor height adjusting device (4822 395 80389)
- Service test stand (4822 395 90896)
- Extension cables
 - 24P, Pick-up ass'y ~ J101 (P106) (4822 321 61124)
 - 3P, J281 (P106) ~ J501 (P506) (4822 321 61071)
 - 5P, J303 (P306) ~ J313 (P506) (4822 321 61337)
 - 6P, J301 (P306) ~ 4P, J311 (P506)/3P, J953 (P926) (4822 321 61338)

A. ADJUSTMENT PREPARATIONS AND PRECAUTIONS

1. Player settings

When adjusting the player, stand the set with the power transformer side down or place the set on the Service Test Stand, and open the MAIN assembly before starting adjustment.

2. Opening the tracking servo

The tracking servo can be opened and closed during test mode controlled by microcomputer.
(For details, refer to "Test Mode Operation".)

3. Test discs

These adjustments use the NTSC test disc (MZ001) or PAL test disc (IMS 1.0). Before adjustments, check item "Test disc" and use a proper test disc.

4. Oscilloscope

Unless specified otherwise, all oscilloscope settings shown in the connection diagrams are values obtained by using a 10:1 probe.

B. TEST MODE OPERATION

1. How to enter Test mode:

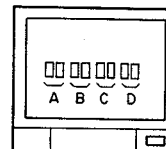
Press and hold the PLAY and PAUSE keys simultaneously, and plug the AC power cord into the power outlet. At this time, the player functions as it normally does. But the RANDOM key does not operate. (The EDIT key and PROGRAM key are equipped on the remote control unit.)

2. Operation

When the unit enters the Test mode, the picture on the TV monitor screen changes to the Test mode picture, where the internal information of the Main μ -COM is displayed.

Except for the Main μ -COM internal information display mode, the Test mode operations can be controlled by the numeric keys of the Remote Control unit.

- Main μ -COM internal information display mode:
The internal information of the Main μ -COM is displayed on the TV monitor display.



Part A: The internal operation mode of the Main μ -COM is displayed in 2 digits.

00 Park mode 06 Play mode
02 Open mode 0A Skip mode
04 Set-up mode

Part B: The operation mode of the Slider motor servo is displayed in 2 digits.

80 Slider motor servo; Closed
81 Slider motor servo; High speed
8E Slider motor servo; Open
00 Slider motor servo; OFF
Tracking servo; OFF

Part C and D: Part C and D respectively represent the control status as follows.

Part C

Control Display	LD/CD	TILT servo	SCAN	Focus
90	CD	OFF	REV	OFF
91	LD	OFF	REV	OFF
92	CD	ON	REV	OFF
93	LD	ON	REV	OFF
94	CD	OFF	FWD	OFF
95	LD	OFF	FWD	OFF
96	CD	ON	FWD	OFF
97	LD	ON	FWD	OFF
98	CD	OFF	REV	ON
99	LD	OFF	REV	ON
9A	CD	ON	REV	ON
9B	LD	ON	REV	ON
9C	CD	OFF	FWD	ON
9D	LD	OFF	FWD	ON
9E	CD	ON	FWD	ON
9F	LD	ON	FWD	ON

Part D

Control Display	Tracking	T-count Divider
A0	CLOSE	1/1
A1	CLOSE	1/1
A2	CLOSE	1/1
A3	CLOSE	1/1
A4	OPEN	1/1
A5	OPEN	1/1
A6	OPEN	1/1
A7	OPEN	1/1
A8	CLOSE	1/256
A9	CLOSE	1/256
AA	CLOSE	1/256
AB	CLOSE	1/256
AC	OPEN	1/256
AD	OPEN	1/256
AE	OPEN	1/256
AF	OPEN	1/256

C. SET-UP KEY FUNCTION MODE

Load a disc normally before entering the Test mode. Press the RANDOM key to access the Set-Up Key Function mode when operating in the Test mode. The screen will then display an "M" at the beginning of the 8 displayed digits. Part A of the display will change to "04" indicating that the unit is in the Set-Up mode. Use the numeric keys **0** through **6**, on the Remote Control unit, to access the various functions listed.

1. Key function

0 key:

The focusing operation can be switched ON/OFF.

Each press of the **0** key alternately toggles focusing ON/OFF. Only in STOP mode.

1 key:

The tilt servo can be switched ON/OFF.

Each press of the **1** key alternately toggles tilt servo ON/OFF. Only in PLAY mode.

2 key:

The forward search can be switched ON/OFF.

Each press of the **2** key alternately toggles forward search ON/OFF. In STOP mode and in PLAY mode, when the tracking servo is OFF.

Remark:

When the outer most slider position is reached, the player goes to the OPEN mode and test mode is terminated.

3 key:

The reverse search can be switched ON/OFF.

Each press of the **3** key alternately toggles reverse search ON/OFF. In STOP mode and in PLAY mode, when the tracking servo is OFF.

Remark:

When the inner most slider position is reached, the player goes to the OPEN mode and test mode is terminated.

4 key:

The tracking servo can be switched ON/OFF.

Each press of the **4** key alternately toggles tracking servo ON/OFF.

5 key:

The spindle servo can be switched ON.

In order to turn off the spindle motor, press the RANDOM key to make the letter "M" disappear, then press the STOP key. If necessary to access the Set-Up Key Function mode again, press the RANDOM key and display an "M", then start.

6 key:

LCD (Multi-function display) check mode's automatic sequence when **6** key is first pressed is described below:

(1) All LCD segments light up (1 sec.)

(2) The LCD numeric display section lights up (all digits are displayed together, then "0" to "9" and "-" are displayed in sequence).

(3) The function indicators and mode indicators on the LCD go ON/OFF one by one in sequence.

(4) Repeat steps (1) to (3).

Each press of the **6** key toggles the LCD check mode ON/OFF alternately.

2. How to terminate Test mode

Press the RANDOM key to make the letter "M" disappear then press the OPEN key.

D. SERVO ASSEMBLY ADJUSTMENTS

IMPORTANT NOTE:

The following Servo adjustments can be performed separately.

Procedure D-7 and D-8

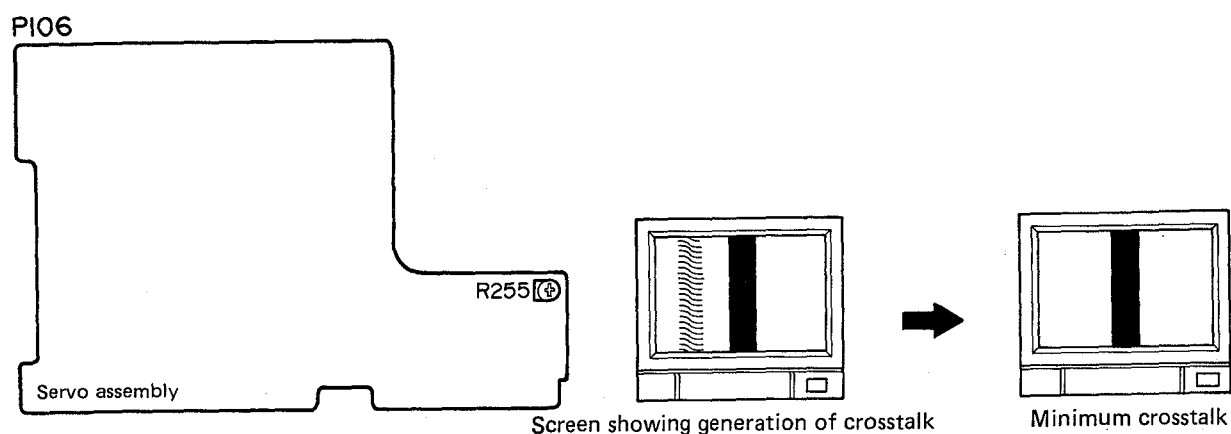
When one of items D-1 to D-6 for servo adjustment has been performed, perform items D-1 to D-6 for servo adjustment again.

D-1 Tilt Balance Adjustment

- Purpose: To adjust the electrical offset of tilt servo by means of the Tilt Balance Control (R255)
- Symptoms indicating need for adjustment: Crosstalk

- | | |
|--|---|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • TV monitor • Player video output terminals • LD test disc (NTSC) #115 • Servo assembly P106, Tilt Balance Control (R255) |
|--|---|

Connection diagram



Adjustment Procedure

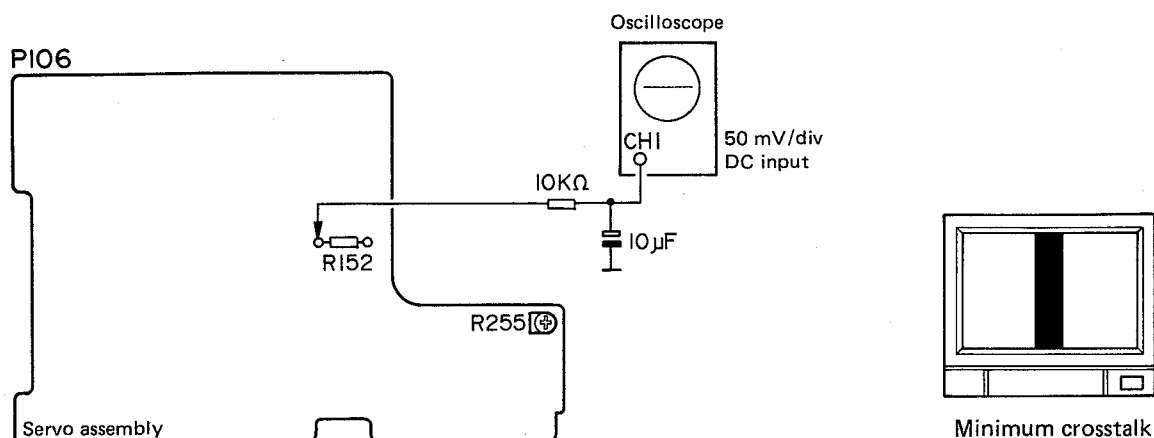
1. Play an LD test disc, and search to frame #115.
2. Turn R255 on the servo assembly board clockwise so that a crosstalk appears on the left side of the monitor screen.
3. Then, turn R255 counterclockwise gradually until the crosstalk at the left side of the screen disappears, then stop turning. (Pay attention not to exceed the point where the crosstalk just goes out.)

D-2 Tilt levelness check and adjustment

- Purpose: Make the tilt chassis be flat against the non-warped disc.
- Symptoms indicating need for adjustment: When a warped disc is loaded, the distance between the disc and the pickup cover becomes insufficient.

- | | |
|--|--|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Resistors (10 kΩ) • Capacitor (10 μF) • TV monitor • Read of R152 on Servo assembly • Player video output terminals • LD test disc (NTSC) #115 and #45565 • Servo assembly P106, Tilt Balance Control (R255) |
|--|--|

Connection diagram



Adjustment procedure

1. Play the LD test disc and search the frame #115.
(Check that there is no warp on the disc beforehand.)
2. Connect the resistor, capacitor and an oscilloscope to the lead wire of R152 on the servo assembly board, as shown in the diagram.
3. Measure the DC voltage when the frame #115 is being played.
4. Then search the frame #45565.
5. At this time, measure the DC voltage and check that the difference from that of #115 is within ± 10 mV.
6. If the measured value is out of standard, adjust R255 so that the DC voltage at #45565 becomes ± 10 mV, using the DC voltage at #115 as a reference.
7. Search the frame #115 and check that the crosstalk does not appear on the monitor screen.
If the crosstalk appears, perform the operation in item D-1. "Tilt Balance Adjustment" again.

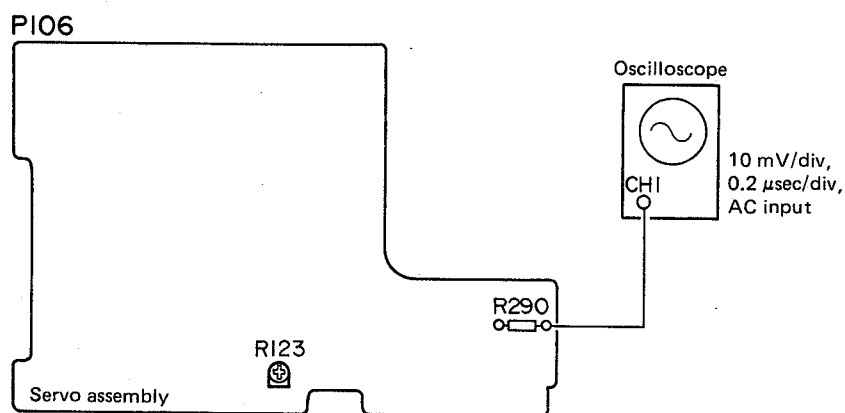
D-3 LD Focus (FOCS) Error Balance Adjustment

- Purpose: To ensure that the FOCS servo maintains the objective lens at the optimum distance from disc during LD playback.
- Symptoms indicating need for adjustment: Crosstalk.

- Measuring instruments and fixtures
- Measuring position
- Test disc and player mode
- Adjustment position

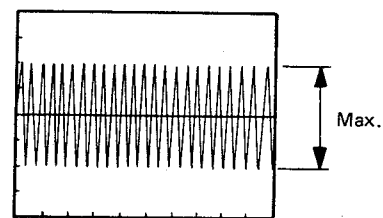
- Oscilloscope
- Lead of R290 on Servo assembly (RF signal)
- LD test disc (NTSC) #15,000 (TRKG servo: closed)
- Servo assembly P106, LD Focus Balance Control (R123)

Connection diagram



Adjustment Procedure

1. Play an LD test disc and search to frame #15,000.
2. Connect the oscilloscope to the lead of R290 on the Servo assembly and observe the RF signal.
3. Adjust R123 on the Servo assembly to obtain maximum RF signal amplitude. (Fig. 25.)



RF Signal

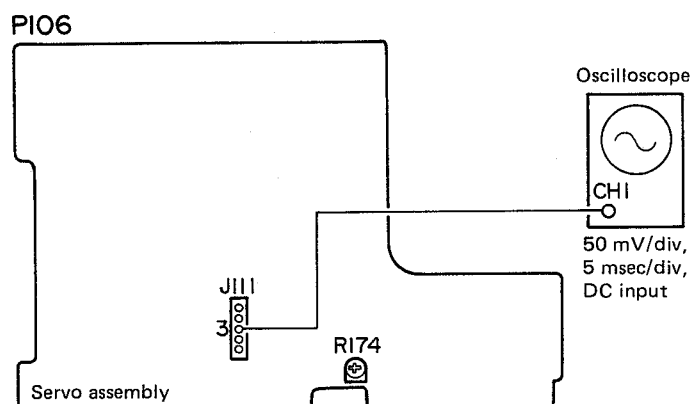
Fig. 25

D-4 Tracking (TRKG) Balance Adjustment

- Purpose: Adjust TRKG servo offset voltage to 0V.
- Symptoms indicating need for adjustment: Improper tracking (Jumping, Skipping etc.)

- | | |
|--|--|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Oscilloscope • Servo assembly J111-3 (TRKG error) • LD test disc (NTSC) #16,000 • Test mode (TRKG servo open), Refer to "Test Mode Operation". • Servo assembly P106, Tracking Balance Control (R174) |
|--|--|

Connection diagrams



Adjustment Procedure

1. Access Test Mode and Play an LD test disc.
2. Press the DISPLAY key to display the frame No. on the TV screen.
3. Move the pick-up to frame #16,000 by scanning or searching using unit's key's.
4. Open the TRKG servo.
5. Connect the oscilloscope to J111-3 of the Servo assembly and observe the waveform.
6. Align the oscilloscope GND with the center of the oscilloscope screen.
7. Adjust R174 in the Servo assembly to a position where the positive and negative halves of the TRKG error waveform are equal. (See Photo 1.)

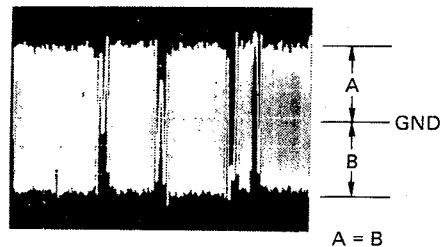


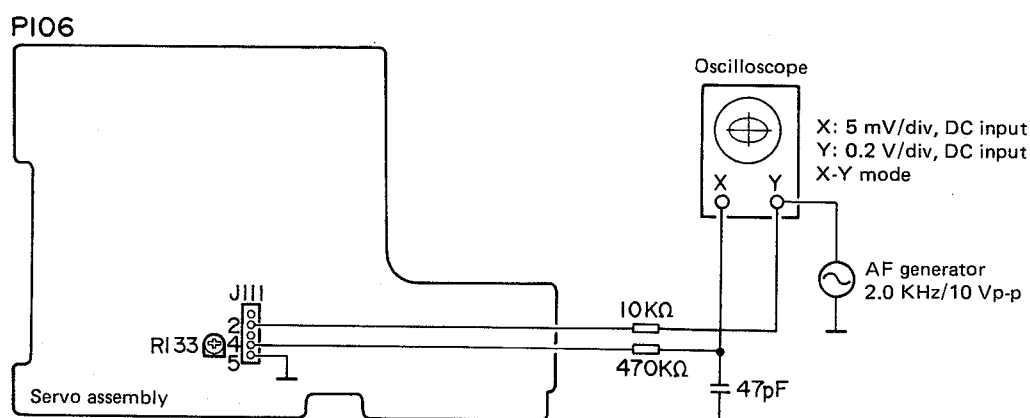
Photo 1.

D-5 FOCS Servo Loop Gain Adjustment

- Purpose: Adjustment of FOCS servo loop gain to the optimum value.
- Symptoms indicating need for adjustment: Degraded playability

- | | |
|--|--|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Oscilloscope • Resistors (10 kΩ, 470 kΩ) • Capacitor (47 pF) • AF generator • Servo assembly J111-4 (FOCS error), J111-2 (FOCS gain) • LD test disc (NTSC) #16,000 (TRKG servo: closed) • Servo assembly P106, Focus Gain Control (R133) |
|--|--|

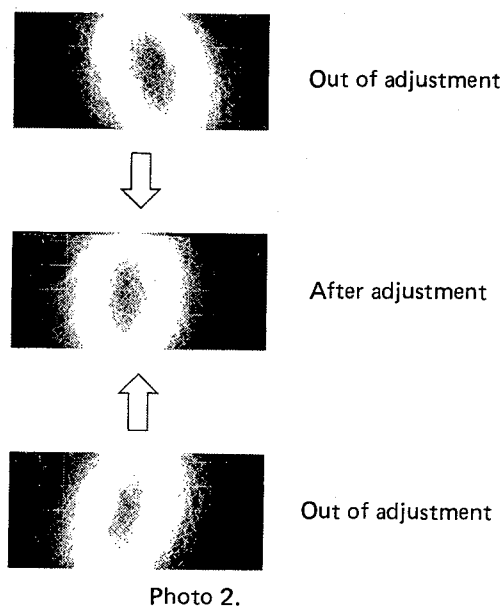
Connection diagram



Adjustment Procedure

1. Connect the resistors, capacitor, AF generator and oscilloscope to J111 on the Servo assembly as shown in the diagram.
2. Set the AF generator output to 2.0 kHz/10 Vp-p.
3. Put the oscilloscope into X-Y mode, and observe the Lissajous figures.
4. Adjust R133 on the Servo assembly until the Lissajous figures become symmetrical along the respective X and Y axes of the oscilloscope. (Photo 2.)

Note: If the disc surface is scratched, the waveforms cannot be read due to noise. Be sure to use a disc which is not damaged.



D-6 TRKG Servo Loop Gain Adjustment

- Purpose: Adjustment of TRKG servo loop gain to the optimum value.

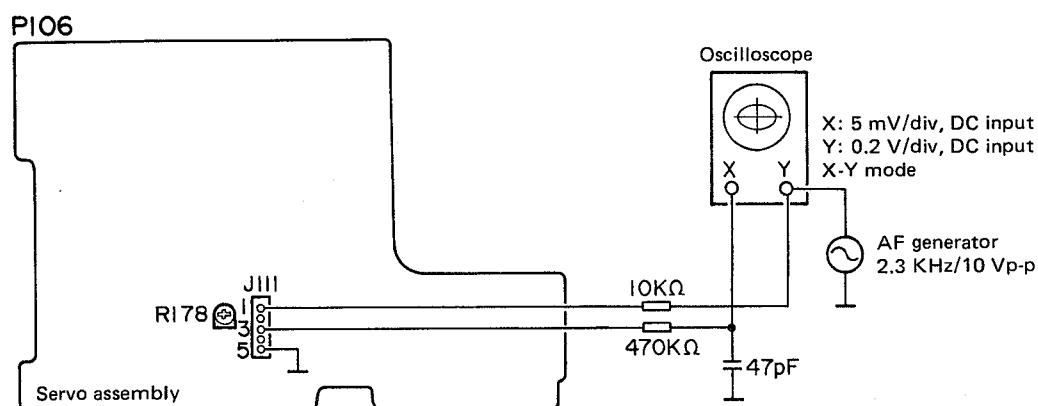
- Symptoms indicating need for adjustment: Degraded playability

If the disc surface is scratched, the waveforms cannot be read due to noise. Be sure to use a disc which is not damaged.

- Measuring instruments and fixtures
- Measuring position
- Test disc and player mode
- Adjustment position

- Oscilloscope • Resistors (10 k Ω , 470 k Ω) • Capacitor (47 pF) • AF generator
- Servo assembly J111-1 (TRKG error), J111-3 (TRKG gain)
- LD test disc (NTSC) #16,000 (TRKG servo: closed)
- Servo assembly P106, Tracking Gain Control (R178)

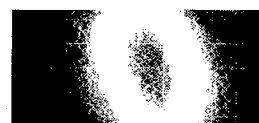
Connection diagram



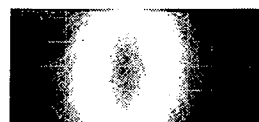
Adjustment Procedure

1. Play an LD test disc and search to frame #16,000.
2. Connect the resistor, AF generators, capacitor and oscilloscope to J111 on the Servo assembly as shown in the diagram.
3. Set the AF generator output to 2.3 kHz/10 Vp-p.
4. Put the oscilloscope into X-Y mode, and observe the Lissajous figures.
5. Adjust R178 on the Servo assembly until the Lissajous figures become symmetrical along their respective X and Y axes of the oscilloscope. (Photo 3.)

Note: If the disc surface is scratched, the waveforms cannot be read due to noise. Be sure to use a disc which is not damaged.



Out of adjustment



After adjustment



Out of adjustment

Photo 3.

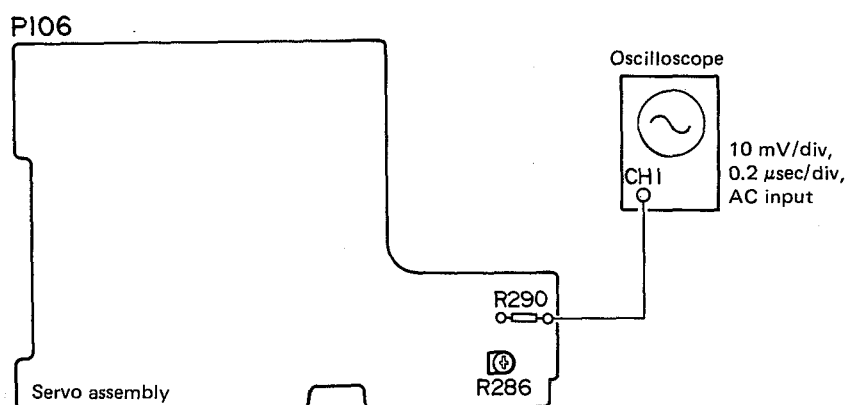
D-7 RF Gain Adjustment

- Purpose: Adjustment of RF signal amplitude to the optimum value.
- Symptoms indicating need for adjustment: Frequent drop-out

- Measuring instruments and fixtures
- Measuring position
- Test disc and player mode
- Adjustment position

- Oscilloscope
- Lead of R290 on Servo assembly (RF signal)
- LD test disc (NTSC) #15,000 (TRKG servo: closed)
(For LD test disc (PAL) RF = $1.2V \pm 50\text{ mV}$)
- Servo assembly P106, RF Gain Control (R286)

Connection diagram



Adjustment Procedure

1. Play an LD test disc and search to frame #15,000.
2. Connect the oscilloscope to the lead of R290 on the Servo assembly and observe the RF signal.
3. Adjust R286 on the Servo assembly to obtain an RF signal amplitude of $800\text{ mV} \pm 20\text{ mV}$. (Fig. 26.)

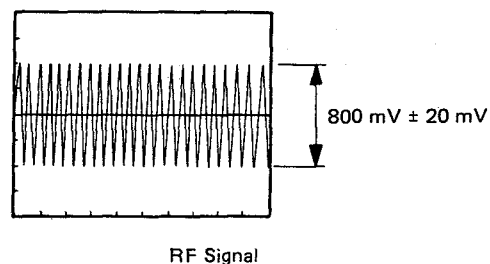


Fig. 26

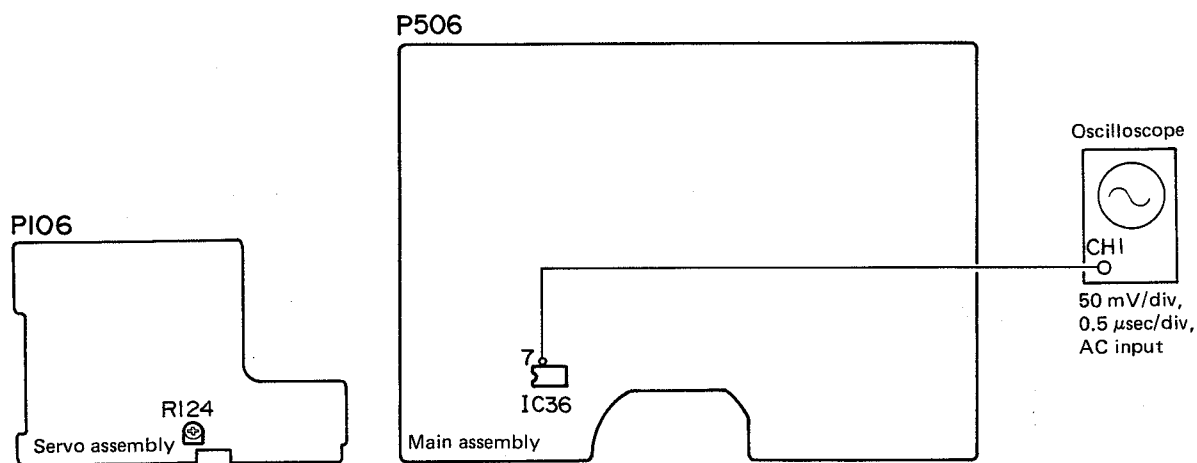
D-8 CD FOCS Error Balance Adjustment

- Purpose: To ensure that the FOCS maintains the objective lens at the optimum distance from the disc during CD playback.
- Symptoms indicating need for adjustment: Noise in CD playback sound

- Measuring instruments and fixtures
- Measuring position
- Test disc and player mode
- Adjustment position

- Oscilloscope
- Main assembly P506, IC36 pin 7
- CD test disc (Philips 5A)
- Servo assembly P106, CD Focus Balance Control (R124)

Connection diagrams



Adjustment Procedure

1. Play a CD test disc.
2. Connect the oscilloscope to pin 7 of IC36 on the Main assembly, and observe the EFM signal (eye pattern).
3. Adjust R124 on the Servo assembly until the EFM signal reaches maximum amplitude. (Photo 4.)

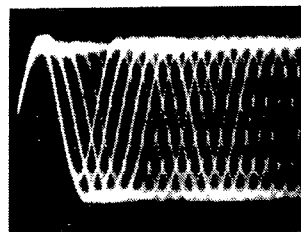


Photo 4. EFM signal

E. MAIN ASSEMBLY ADJUSTMENTS

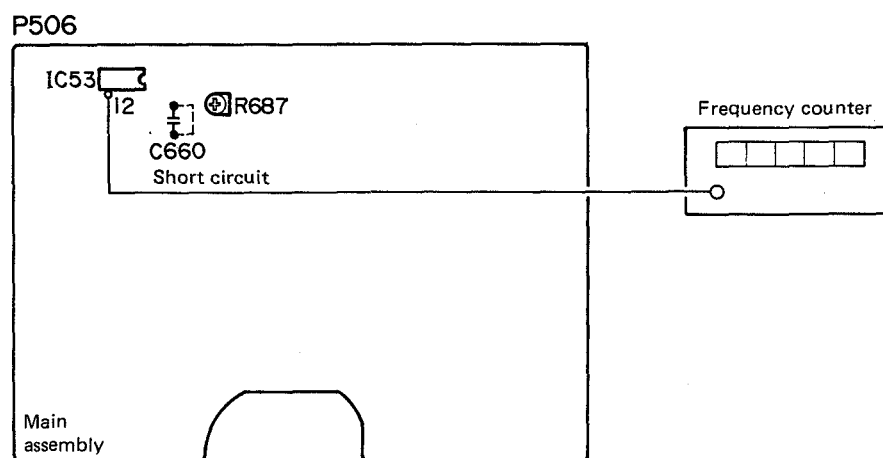
E-1 VCO Center Frequency Adjustment (Video)

- Purpose: Optimization of the CCD delay time for time base error compensation purposes.
- Symptoms indicating need for adjustment: Color lock failure. Slow color lock after a search.

- Measuring instruments and fixtures
- Measuring position
- Test disc and player mode
- Adjustment position

- Frequency counter
- Main assembly P506, IC53 pin 12
- Turn ON the power switch only after the shorting jumper across C660 has been installed.
- Main assembly P506, VCO Center Frequency Control (R687)

Connection diagram



Adjustment Procedure

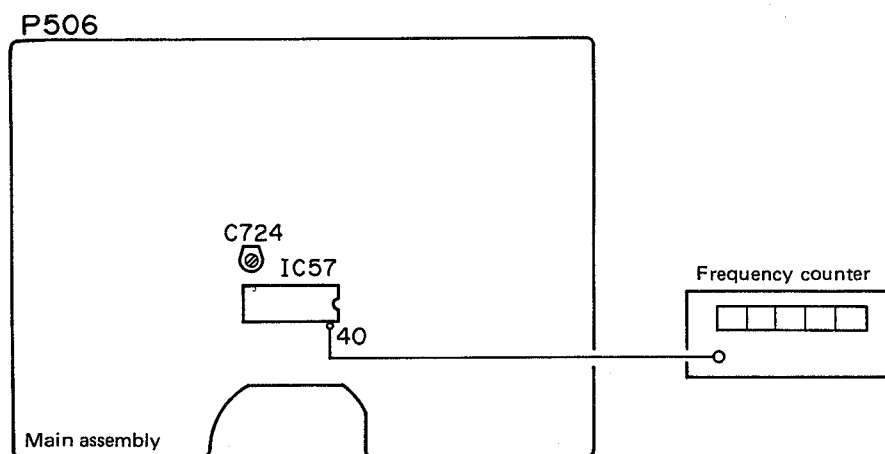
1. Turn ON power only after the shorting jumper across C660 has been installed.
2. Connect a frequency counter to the pin 12 of IC53 on the main assembly.
3. Adjust R687 so that VCO oscillates at $16.6 \text{ MHz} \pm 0.3 \text{ MHz}$.
4. Turn OFF the power switch and remove shorting jumper from C660.

E-2 7.15909 MHz Adjustment (Video)

- Purpose: NTSC Reference clock frequency adjustment (7.15909 MHz)
- Symptoms indicating need for adjustment: Color aberration, spindle servo lock failure

- | | |
|--|---|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Frequency counter • Main assembly P506, IC57 pin 40 • LD test disc (NTSC) • Main assembly P506, 7.15909 MHz Control (C724) |
|--|---|

Connection diagram



Adjustment Procedure

1. Play the NTSC disc and stop (to enter the NTSC mode). Then connect the frequency counter to pin 40 of IC57 of the Main assembly.
2. Adjust C724 on the Video assembly until the reference clock frequency reads 7.15909 MHz $\pm$ 10 Hz.

Important note:

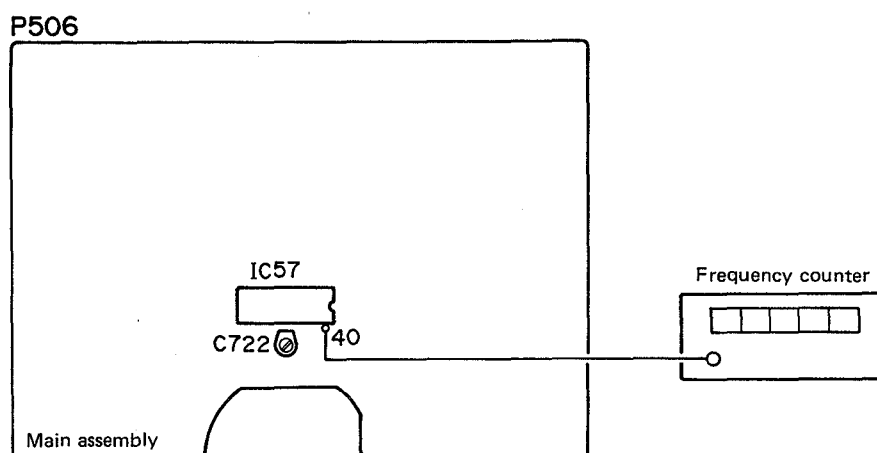
When this adjustment has been made, be sure to perform item E-6 (still pulse signal level adjustment) and item E-7 (VPS adjustment).

E-3 7.5000 MHz Adjustment (Video)

- Purpose: PAL Reference clock frequency adjustment (7.5000 MHz)
- Symptoms indicating need for adjustment: Color aberration, spindle servo lock failure

- | | |
|--|---|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Frequency counter • Main assembly P506, IC57 pin 40 • LD test disc (PAL) • Main assembly P506, 7.5000 MHz Control (C722) |
|--|---|

Connection diagram



Adjustment Procedure

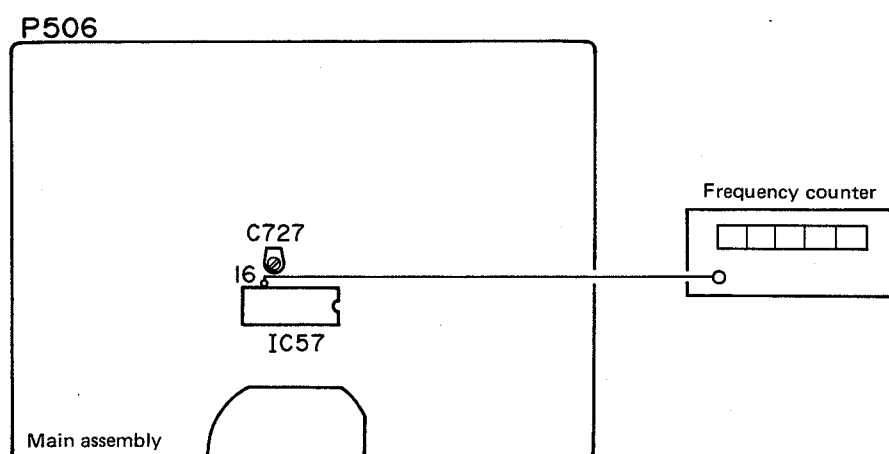
1. Play the PAL disc and stop (to enter the PAL mode). Then connect the frequency counter to pin 40 of IC57 of the Main assembly.
2. Adjust C722 on the Video assembly until the reference clock frequency reads $7.5000 \text{ MHz} \pm 10 \text{ Hz}$.

E-4 8.86724 MHz Adjustment (Video)

- Purpose: PAL Reference clock frequency adjustment 8.86724 MHz)
- Symptoms indicating need for adjustment: Images are not colored.

- | | |
|--|--|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Frequency counter • Main assembly P506, IC57 pin 16 • LD test disc (PAL) • Main assembly P506, 8.86724 MHz Control (C727) |
|--|--|

Connection diagram



Adjustment Procedure

1. Play the PAL disc and stop (to enter the PAL mode). Then connect the frequency counter to pin 16 of IC57 of the Main assembly.
2. Adjust C727 on the Video assembly until the reference clock frequency reads 8.86724 MHz $\pm$ 10 Hz.

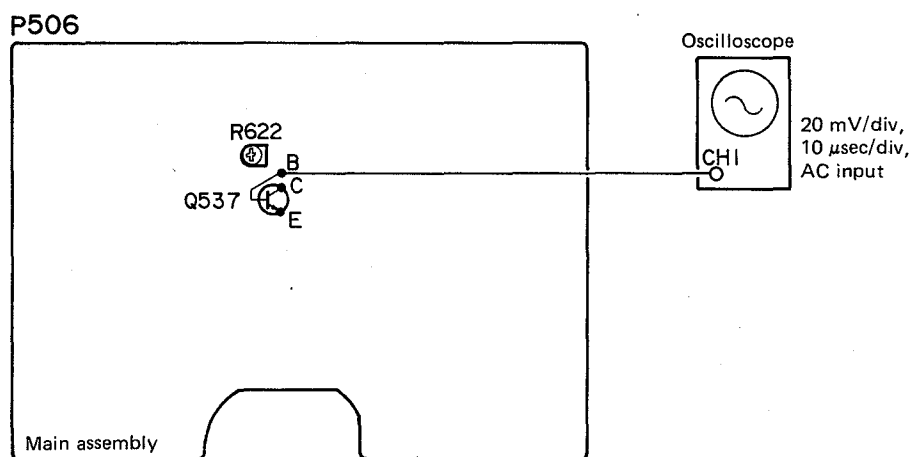
E-5 Residual Chroma Level Adjustment (Video) Q537 (base)

- Purpose: To minimize the residual chroma level of the Y signal of the Y/C separator used in the noise reduction circuit.
- Symptoms indicating need for adjustment: Color tone errors or color blur in reproduced images.

- Measuring instruments and fixtures
- Measuring position
- Test disc and player mode
- Adjustment position

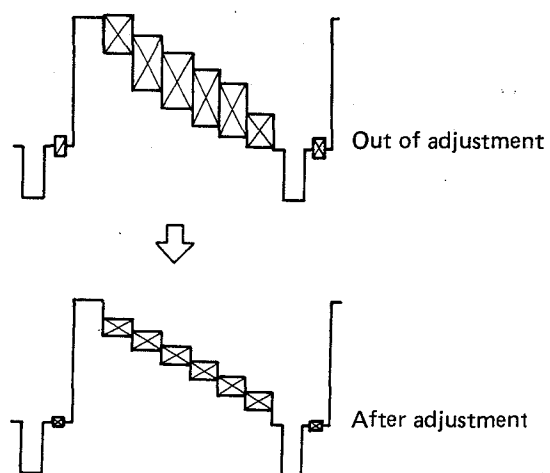
- Oscilloscope
- Main assembly P506, Q537 (base)
- LD test disc (NTSC) #5,701 (#5,701)
- Main assembly P506, Chroma Level Control (R622)

Connection diagram



Adjustment Procedure

1. Play the NTSC test disc, search to frame #5,701 (#5,701) and display its still image.
2. Adjust R622 on the Main assembly to minimize the chroma level.



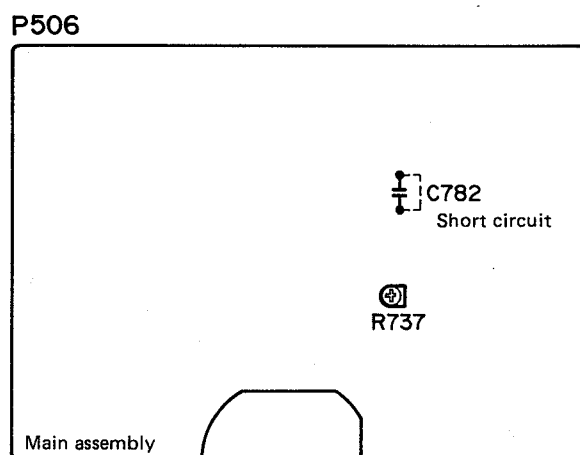
E-6 Still Pulse Signal Level Adjustment (Video)

- Purpose: To adjust the amount of pulses to be injected into the TBC error signal during still operation with a CAV disc.
- Symptoms indicating need for adjustment: Flickers appear on the screen during still operation with a CAV disc.

- Measuring instruments and fixtures
- Measuring position
- Test disc and player mode
- Adjustment position

- TV monitor
- Adjust while watching the monitor screen.
- LD test disc (NTSC) #7,201
- Turn ON the power switch after the shorting jumper across C782 has been installed.
- Main assembly P506, Still Pulse Level Control (R737)

Connection diagram



Adjustment Procedure

1. Turn ON the power switch after the shorting jumper across C782 has been installed.
2. Play an LD test disc and search to frame #7,201 (#26,101).
3. Adjust R737 on the Main assembly to minimize magenta screen color flickers (Streaking).
4. Turn OFF the power switch and remove shorting jumper from C782.

Important notice:

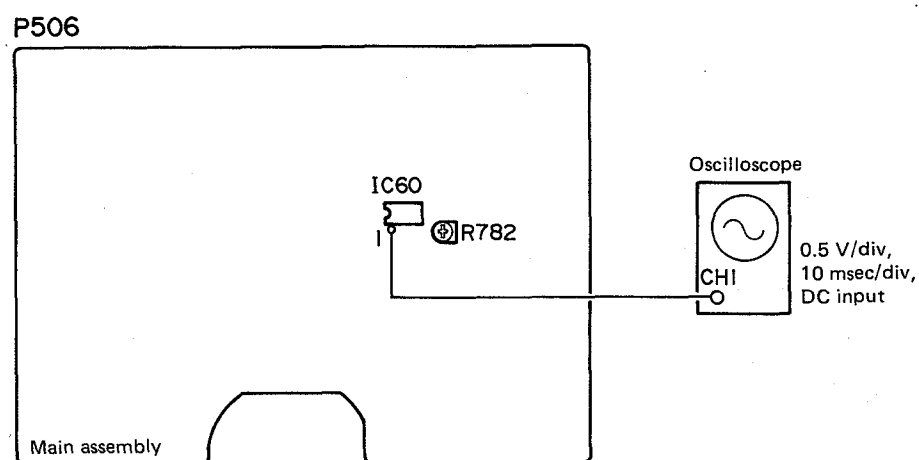
After this adjustment, be sure to perform item E-7 (VPS adjustment).

E-7 VPS (Video Phase Shifter) Adjustment (Video)

- Purpose: To reduce color flicker in video output.
- Symptoms indicating need for adjustment: Flickers are observed on still images of CAV disc.

- | | |
|--|--|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Oscilloscope • TV monitor • Main assembly P506, IC60 pin 1 • LD test disc (NTSC) #7,201 • Main assembly P506, VPS Bias Control (R782) |
|--|--|

Connection diagram

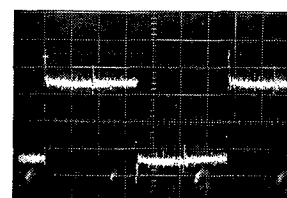


Adjustment Procedure

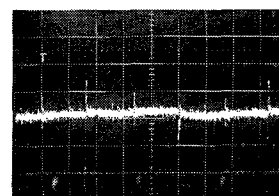
1. Play the LD test disc and search to frame #7,201.
2. Observe IC60 pin 1 on an oscilloscope, and adjust R782 so that the square waves on the oscilloscope screen form a continuous line (Photo 5).

Important note:

If color flicker is still noticeable after the adjustment above, perform item E-6 (Still pulse signal level adjustment).



Out of adjustment



After adjustment

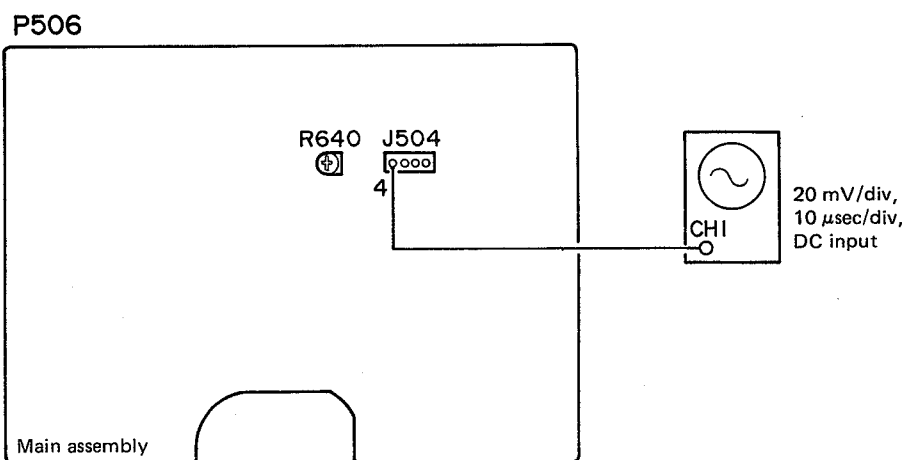
Photo 5.

E-8 Output Video Level Adjustment (Video)

- Purpose: Adjustment of the amplitude of the output video signal (from sync-tip to 100% white) to 1.0 Vp-p.
- Symptoms indicating need for adjustment: Screen too bright or too dark.

- | | |
|--|--|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Oscilloscope • Main assembly J504-4 • LD test disc (NTSC) #19,801 • Main assembly P506, Output Video Level Control (R640) |
|--|--|

Connection diagrams



Adjustment Procedure

1. Play an LD test disc and search to frame #19,801. (#19,801)
2. Connect the oscilloscope to J504-4 of the Main assembly, and observe the playback video signal waveform.
3. Adjust R640 on the Main assembly until the amplitude from the sync-tip to the white peak of the playback video signal waveform reaches 1.0 Vp-p $\pm$ 5%. (Photo 5.)

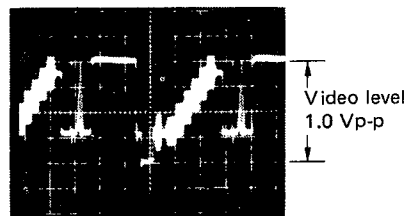


Photo 6.

E-9 1H Delayed Video Level Adjustment-NTSC (Video)

● Purpose: Adjustment of the amplitude of the 1H delayed video signal to the same amplitude as the main video signal. ● Symptoms indicating need for adjustment: Considerable white drop-out and H displacement (horizontal lines on the screen) when 1H level is large, and considerable black drop-out when 1H level is small.	
● Measuring instruments and fixtures ● Measuring position ● Test disc and player mode ● Adjustment position	● Oscilloscope ● Main assembly J504-4 ● LD test disc (NTSC) #38,000 ● Main assembly P506, 1H Delayed Video Level Control-NTSC (R509)
Connection diagram [How to prepare a dropout disc] Horizontal video signal referring to lower part of TV screen. Horizontal video signal referring to upper part of TV screen V-sync. Test disc Attach a colored tape of about 1/64" (0.5 mm) width to a place corresponding to the horizontal video signal referring to the upper part of the TV screen on the test disc. 20 mV/div, 0.5 msec/div, Delay time: 20 μsec/div. Oscilloscope CHI J504 4 R509 P506 Main assembly Fig. 27	
Adjustment Procedure 1. Play an LD test disc and search to the 100% white screen. Example: Frame #38,000. 2. Connect an oscilloscope to J504-4 of the Main assembly and observe the video waveform. In this case, applying a trigger from the V-sync. (TV-V) within the oscilloscope and also using a time delay, seek out the horizontal video signal of which dropout occurs. 3. Adjust R509 so that the dropout level becomes the same as video signal level. <i>Note: When dropout is not discovered even by searching to the 100% white screen of the test disc, you can make a dropout disc as shown in Fig. 28.</i>	Dropout level Video signal level NG OK NG Fig. 28

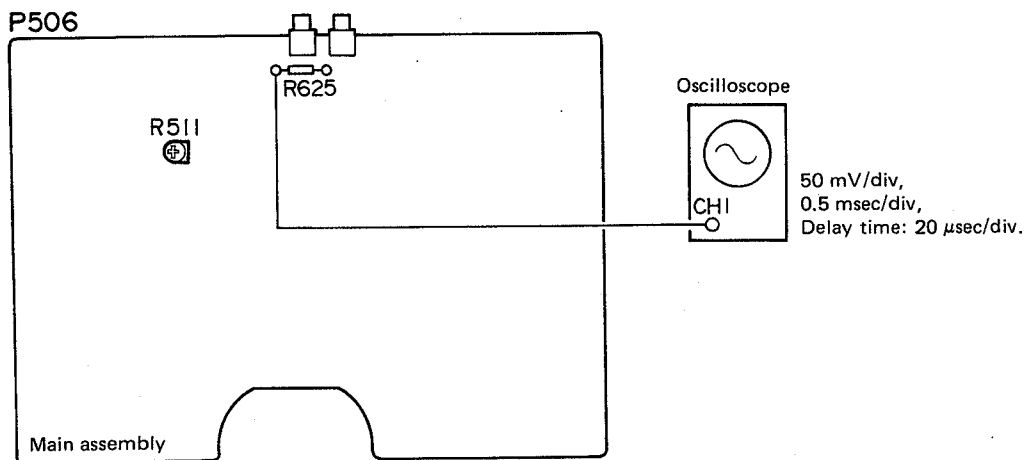
E-10 1H Delayed Video Level Adjustment-PAL (Video)

- Purpose: Adjustment of the amplitude of the 1H delayed video signal to the same amplitude as the main video signal.
- Symptoms indicating need for adjustment: Considerable white drop-out and H displacement (horizontal lines on the screen) when 1H level is large, and considerable black drop-out when 1H level is small.

- Measuring instruments and fixtures
- Measuring position
- Test disc and player mode
- Adjustment position

- Oscilloscope
- Main assembly J504-4
- LD test disc (PAL) #23,850
- Main assembly P506, 1H Delayed Video Level Control-PAL (R511)

Connection diagram



Adjustment Procedure

1. Play an LD test disc and search the frame #23,850.
2. Connect an oscilloscope to J504-4 and observe the video waveform. In this case, applying a trigger from the V-sync. (TV-V) within the oscilloscope and also using a time delay, seek out the horizontal video signal of which dropout occurs.
3. Adjust R511 so that the amplitude of the dropout video signal becomes as same as that of the video signal without dropout. (Fig. 29)

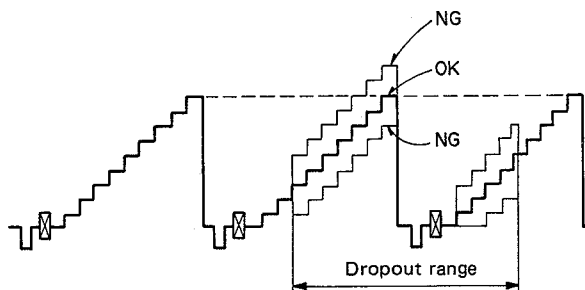


Fig. 29

F. RGB ASSEMBLY ADJUSTMENTS

IMPORTANT NOTE:

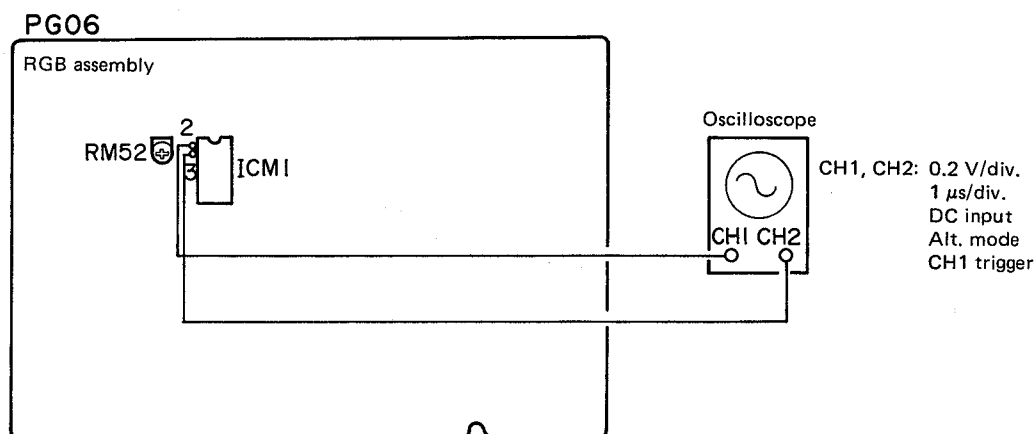
Adjust in the order of item number. In case any of adjustment items F-2 to F-5 is done in the RGB adjustment, be sure also to perform all adjustments after that item until item F-5. Also, in case any of adjustment items F-6 to F-9 is done, perform all adjustments after that item until item F-9.

F-1 BF (burst flag) Position Adjustment

- Purpose: Adjustment of burst flag to color burst position
- Symptoms indicating need for adjustment: Color noise. Image not color.

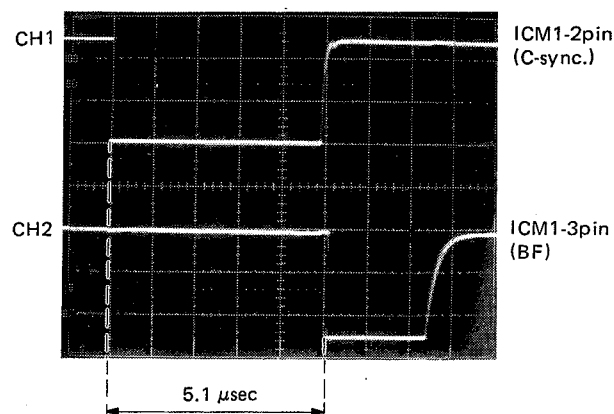
- | | |
|--|---|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Oscilloscope • RGB assembly PG06, ICM1 pin 2 and pin 3 • Playing LD test disc (NTSC) • RGB assembly PG06, BF Position Control (RM52) |
|--|---|

Connection diagram



Adjustment Procedure

1. Play a LD disc.
2. Connect the CH1 of the oscilloscope to the pin 2 (C-sync.) of ICM1 and connect the CH2 to the pin 3 (BF) of ICM1.
3. Observe both wave forms of CH1 and CH2 simultaneously. Adjust RM52 so that the time length between the point when the C-sync, wave reaches the bottom and the point when the BF wave reaches the bottom is 5.1 μ seconds.

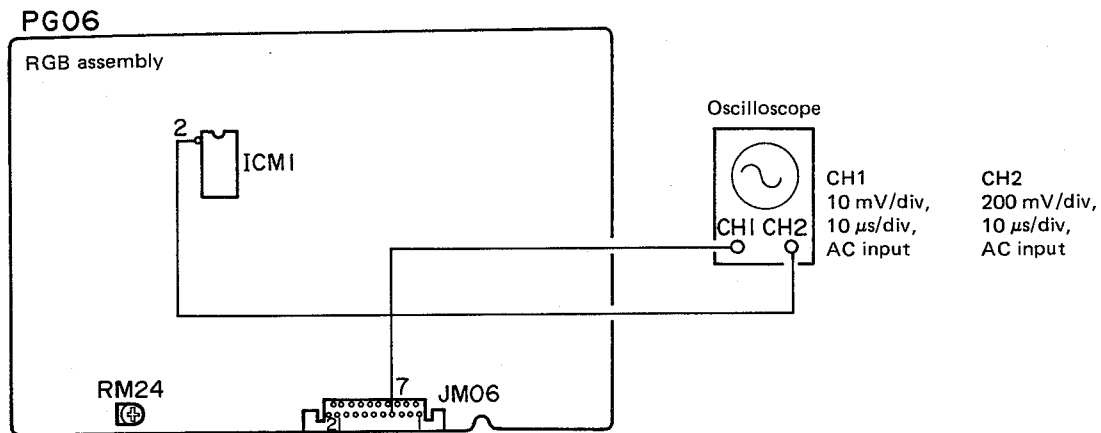


F-2 Luminance Amplifier Level Adjustment-NTSC

- Purpose: Output level adjustment
- Symptoms indicating need for adjustment: Screen being too dark or too bright.

- | | |
|--|---|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Oscilloscope • RGB assembly PG06, JM06-7, ICM1 pin 2 • LD test disc (NTSC) Chapter 7 • RGB assembly PG06, Luminance Level Control (RM24) |
|--|---|

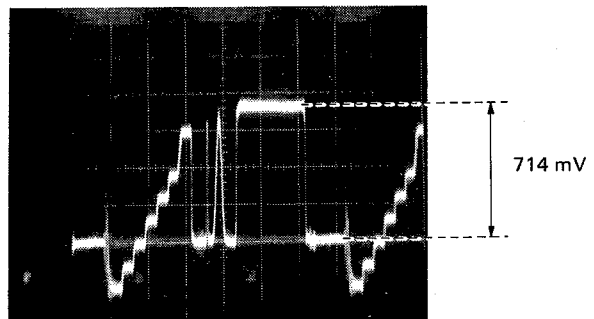
Connection diagram



Adjustment Procedure

1. Play the LD test disc and search for the chapter 7.
2. Connect the oscilloscope as shown in the diagram, trigger at CH2 and observe the B signal.
3. Adjust RM24 on RGB assembly so that the amplitude of B signal during playback is 714 mVp-p $\pm$ 5%.

*Note: The RGB output terminal be connected the monitor TV in which the RGB output terminal is terminated to a 75Ω resistor.
If a monitor TV without RGB terminal is used, terminate the B output terminal (7 pin of JM06) with a 75Ω resistor.*

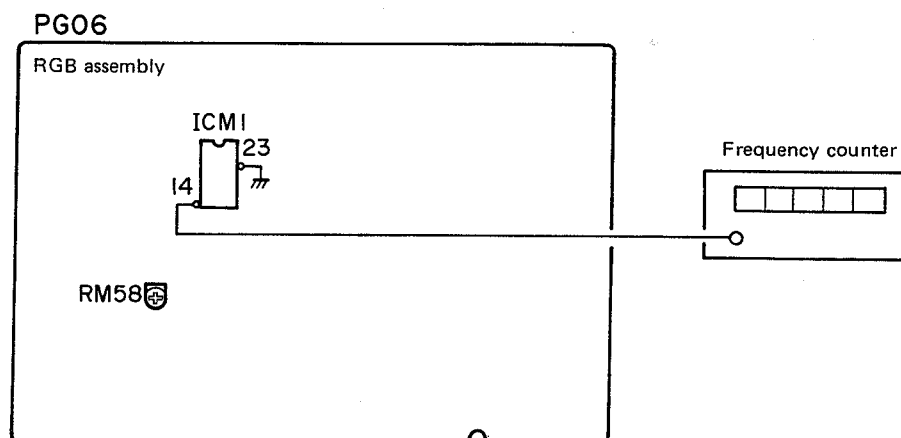


F-3 VCXO Adjustment of RGB Decoder-NTSC

- Purpose: Adjustment of free-run frequency of RGB decoder
- Symptoms indicating need for adjustment: Color uneven. Coloring difficult after search.

- | | |
|--|---|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Frequency counter • RGB assembly PG06, ICM1 pin 14 • LD test disc (NTSC) • RGB assembly PG06, VCXO Adjust Control (RM58) |
|--|---|

Connection diagram



Adjustment Procedure

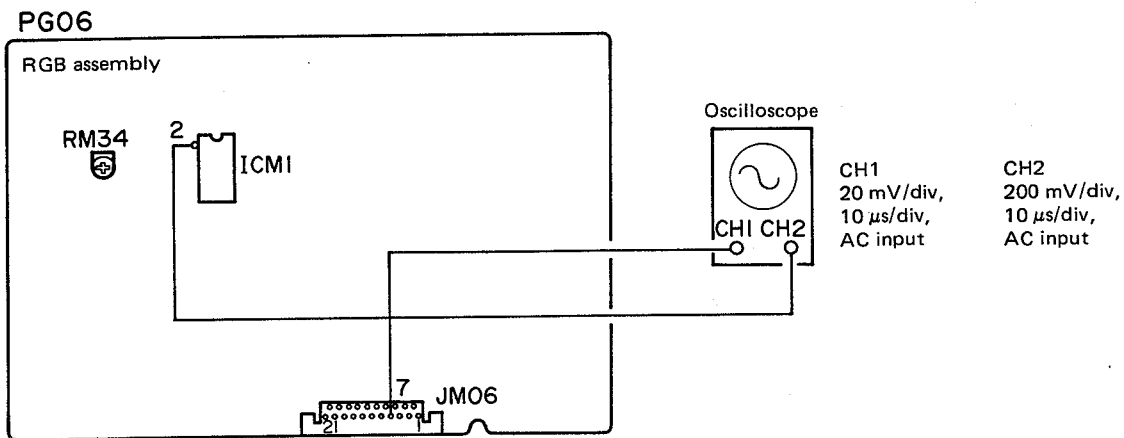
1. Ground ICM1 pin 23.
2. Play the NTSC disc and stop. Then connect the frequency counter to ICM1 pin 14 of the RGB assembly.
3. Adjust RM58 so that the frequency counter reads $3.5795 \text{ MHz} \pm 200 \text{ Hz}$.

F-4 Chroma Amplifier Level Adjustment-NTSC

- Purpose: Chroma level adjustment
- Symptoms indicating need for adjustment: Colors are too pale or deep.

- | | |
|--|---|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Oscilloscope • RGB assembly PG06, JM06-7, ICM1 pin 2 • LD test disc (NTSC) Chapter 12 • RGB assembly PG06, Chroma Level Control (RM34) |
|--|---|

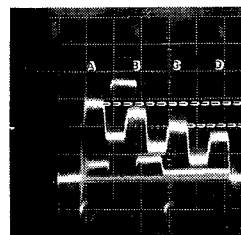
Connection diagram



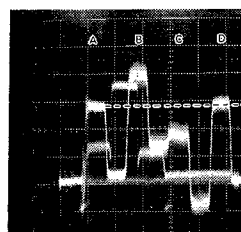
Adjustment Procedure

1. Play the LD test disc and search for the chapter 12.
2. Connect the oscilloscope as shown in the diagram, trigger at CH2 and observe the B signal.
3. Adjust RM34 of the RGB assembly so that the levels of sections "A" and "D" on the reproduced B signal waveform are equal. Repeat this adjustment and the adjustment of item F-5 alternately until all of the levels of A, B, C and D become equal.

Note: The RGB output terminal be connected the monitor TV in which the RGB output terminal is terminated to a 75Ω resistor.
If a monitor TV without RGB terminal is used, terminate the B output terminal (7 pin of JM06) with a 75Ω resistor.



Before adjustment



After adjustment

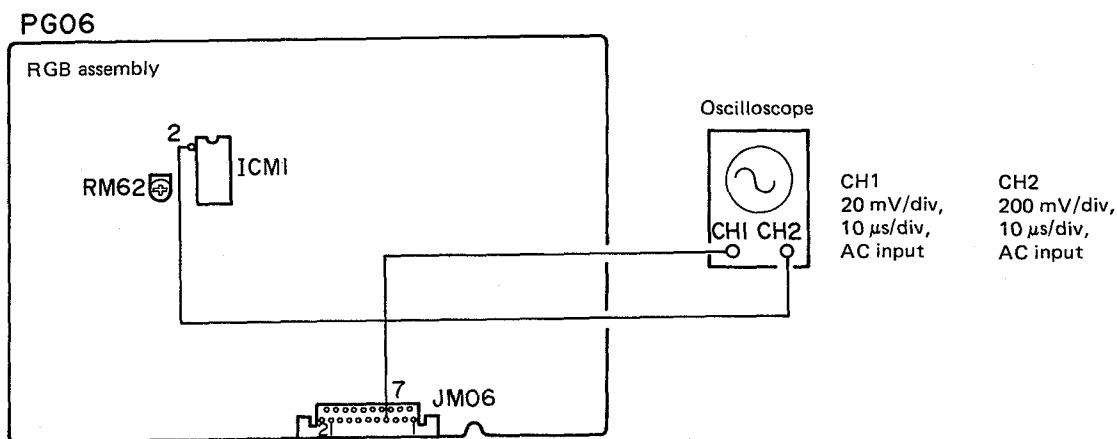
F-5 Hue Adjustment-NTSC

- Purpose: Alignment of hue in NTSC disc playback.
- Symptoms indicating need for adjustment: Hue is not aligned properly.

- Measuring instruments and fixtures
- Measuring position
- Test disc and player mode
- Adjustment position

- Oscilloscope
- RGB assembly PG06, JM06-7, ICM1 pin 2
- LD test disc (NTSC) Chapter 12
- RGB assembly PG06, Hue Control (RM62)

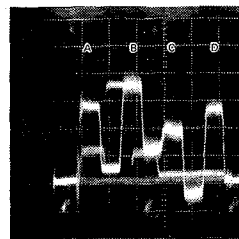
Connection diagram



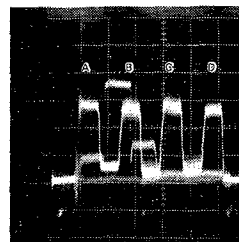
Adjustment Procedure

1. Play the LD test disc and search for the chapter 12.
2. Connect the oscilloscope as shown in the diagram, trigger at CH2 and observe the B signal.
3. Adjust RM62 of the RGB assembly so that the levels of sections "A", "B", "C" and "D" on the reproduced B signal waveform are equal.
Repeat adjustment items F-4 and F-5 alternately until all of these levels become equal.

*Note: The RGB output terminal be connected the monitor TV in which the RGB output terminal is terminated to a 75 Ω resistor.
If a monitor TV without RGB terminal is used, terminate the B output terminal (7 pin of JM06) with a 75 Ω resistor.*



Before adjustment



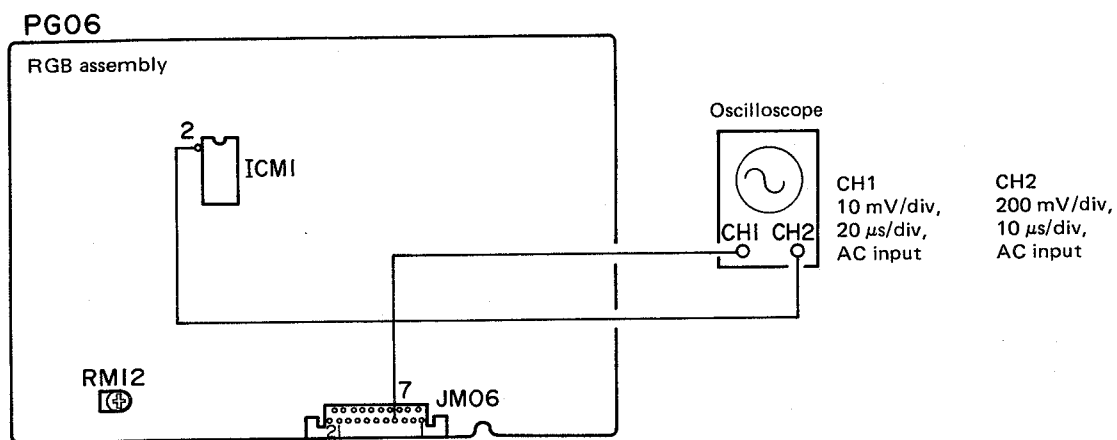
After adjustment

F-6 Luminance Amplifier Level Adjustment-PAL

- Purpose: Output level adjustment
- Symptoms indicating need for adjustment: Screen being too dark or too bright.

- | | |
|--|---|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Oscilloscope • RGB assembly PG06, JM06-7, ICM1 pin 2 • LD test disc (PAL) #1,200 • RGB assembly PG06, Luminance Level Control (RM12) |
|--|---|

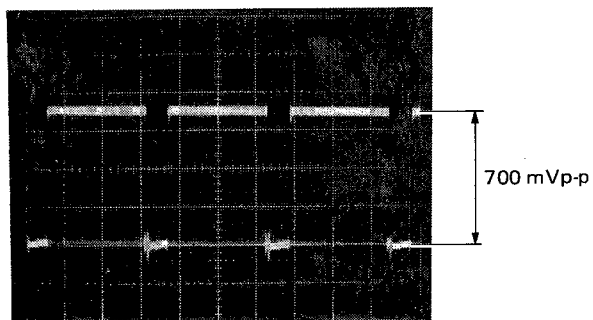
Connection diagram



Adjustment Procedure

1. Play the LD test disc and search for the frame 1,200.
2. Connect the oscilloscope as shown in the diagram, trigger at CH2 and observe the B signal.
3. Adjust RM12 on RGB assembly so that the amplitude of B signal during playback is 700 mVp-p $\pm$ 5%.

*Note: The RGB output terminal be connected the monitor TV in which the RGB output terminal is terminated to a 75 Ω resistor.
If a monitor TV without RGB terminal is used, terminate the B output terminal (7 pin of JM06) with a 75 Ω resistor.*

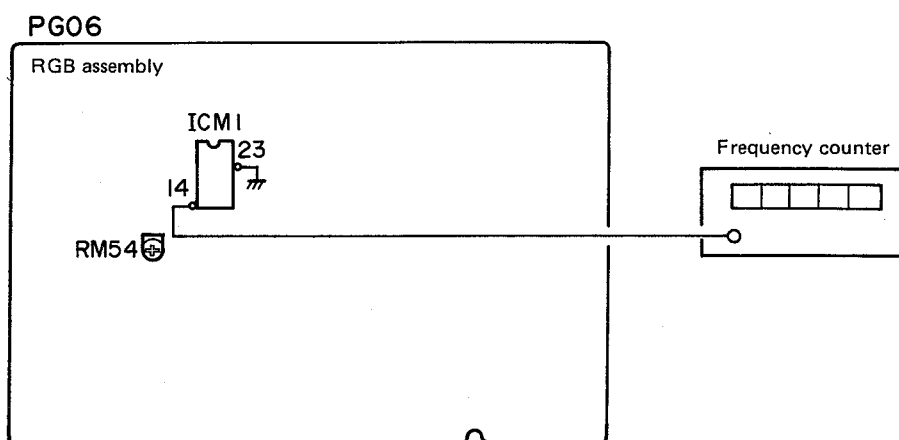


F-7 VCXO Adjustment of RGB Decoder-PAL

- Purpose: Adjustment of free-run frequency of RGB decoder
- Symptoms indicating need for adjustment: Color uneven. Coloring difficult after search.

- | | |
|--|--|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Frequency counter • RGB assembly PG06, ICM1 pin 14 • LD test disc (PAL) • RGB assembly PG06, VCXO Adjust Control (RM54) |
|--|--|

Connection diagram



Adjustment Procedure

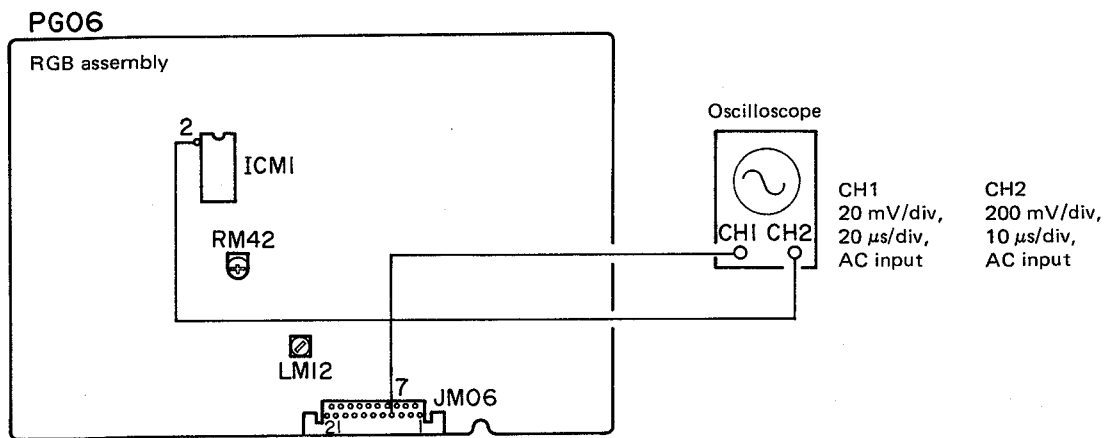
1. Ground ICM1 pin 23.
2. Play the PAL disc and stop. Then connect the frequency counter to ICM1 pin 14 of the RGB assembly.
3. Adjust RM54 so that the frequency counter reads $4.433600 \text{ MHz} \pm 200 \text{ Hz}$.

F-8 1H Delay Chroma Level Adjustment-PAL

- Purpose: Adjustment of chroma level output with 1H delay
- Symptoms indicating need for adjustment: Flicker being obvious

- | | |
|--|--|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Oscilloscope • RGB assembly PG06, JM06-7, ICM1 pin 2 • LD test disc (PAL) #260 • RGB assembly PG06, 1H Delay Level Control (RM42), (LM12) |
|--|--|

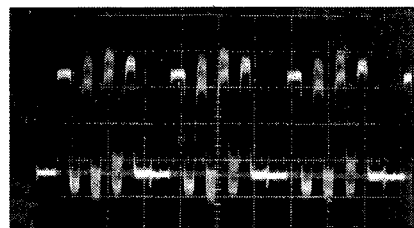
Connection diagram



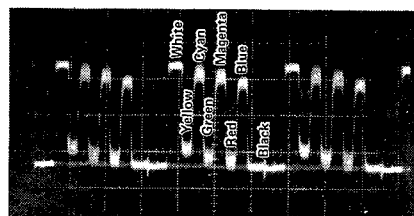
Adjustment Procedure

1. Play the LD test disc and search for the frame #260.
2. Connect the oscilloscope as shown in the diagram, trigger at CH2 and observe the B signal.
3. First adjust R42 to minimize the amplitudes observed on the upper and lower parts of waveforms, then adjust LM12. When adjusting LM12, be careful not to damage the core.

Note: The RGB output terminal be connected the monitor TV in which the RGB output terminal is terminated to a 75Ω resistor.
If a monitor TV without RGB terminal is used, terminate the B output terminal (7 pin of JM06) with a 75Ω resistor.



Before adjustment



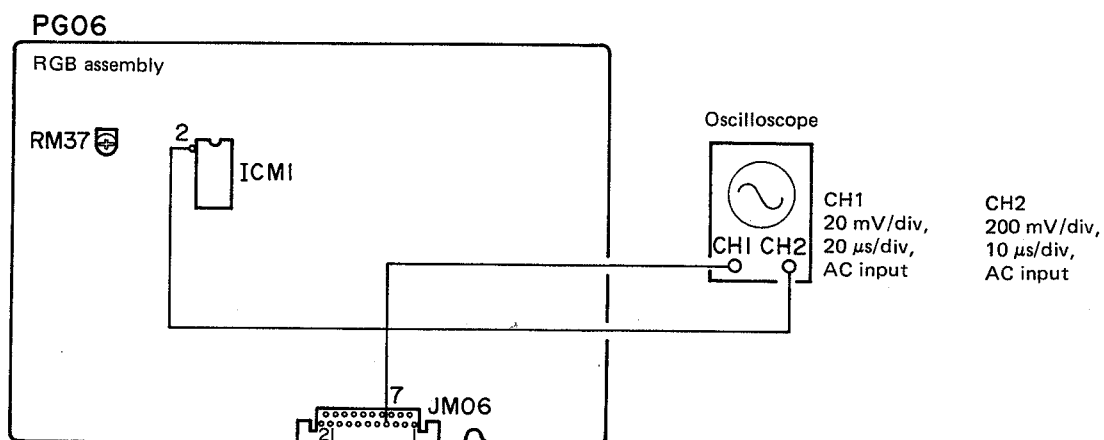
After adjustment

F-9 Chroma Amplifier Level Adjustment-PAL

- Purpose: Adjustment of Chroma level
- Symptoms indicating need for adjustment: Colors are too pale or deep

- | | |
|--|--|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • Oscilloscope • RGB assembly PG06, JM06-7, ICM1 pin 2 • LD test disc (PAL) #260 • RGB assembly PG06, Chroma Level Control (RM37) |
|--|--|

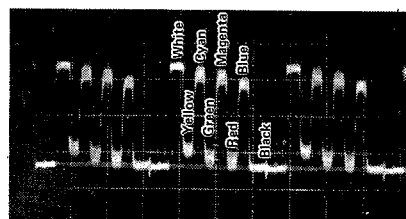
Connection diagram



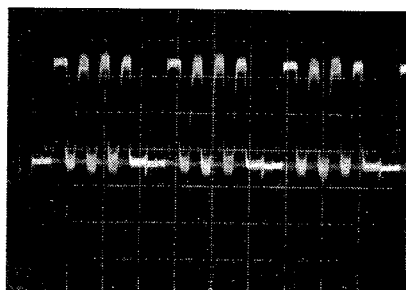
Adjustment Procedure

1. Play the LD test disc and search for the frame #260.
2. Connect the oscilloscope as shown in the diagram, trigger at CH2 and observe the B signal.
3. Adjust RM37 so that the each color level of B signal in playback is the same.

Note: The RGB output terminal be connected the monitor TV in which the RGB output terminal is terminated to a 75Ω resistor.
If a monitor TV without RGB terminal is used, terminate the B output terminal (7 pin of JM06) with a 75Ω resistor.



Before adjustment



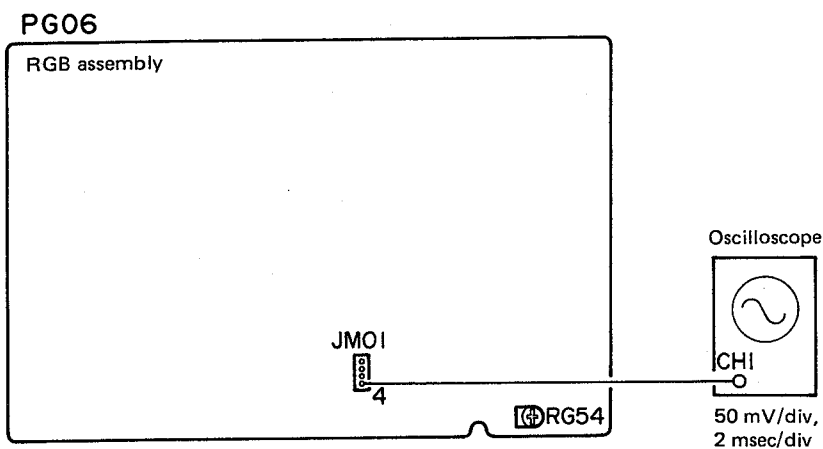
After adjustment

F-10 Color Beat (Interference) Cancel Adjustment

- Purpose: Adjusting the delay time of the chroma signal applied to the main video signal.
- Symptoms indicating need for adjustment: Beat (interference) is noticeable in color image.

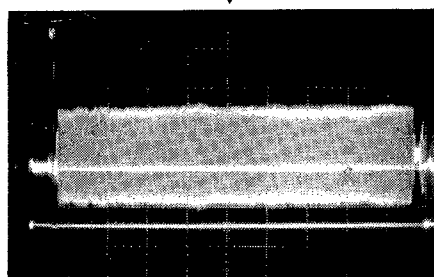
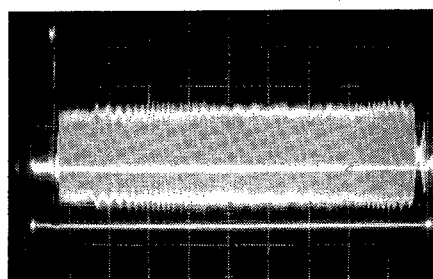
- | | |
|--|--|
| <ul style="list-style-type: none"> • Measuring instruments and fixtures • Measuring position • Test disc and player mode • Adjustment position | <ul style="list-style-type: none"> • TV monitor • Oscilloscope • RGB assembly PG06, JM01-4 • LD test disc (NTSC) Chapter 16 • RGB assembly PG06, Delay Time Control (RG54) |
|--|--|

Connection diagram



Adjustment Procedure

1. Play an LD test disc, search to chapter 16 and still.
2. Connect an oscilloscope to JM01-4 on the Main assembly and trigger with the V-sync.
3. Adjust RG54 in the RGB assembly so that the V-sweep waveform displayed in the oscilloscope becomes float.

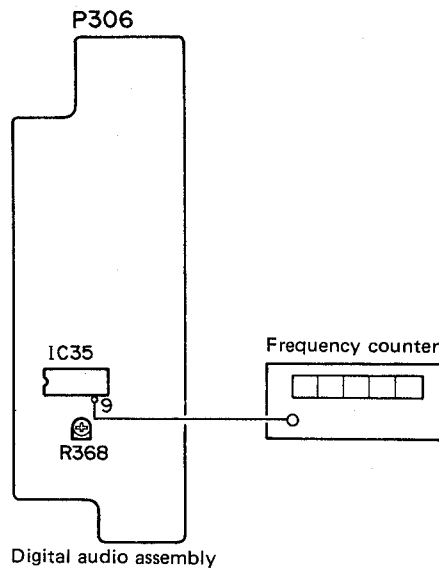


G. DIGITAL AUDIO ASSEMBLY ADJUSTMENT
G-1 VCXO Adjustment (Digital Audio)

- Purpose: Adjusts the CD system clock to 11.2896 MHz.
- Symptoms indicating need for adjustment: Digital sound is interrupted.

- | | |
|---|--|
| <ul style="list-style-type: none">• Measuring instruments and fixtures• Measuring position• Test disc and player mode• Adjustment position | <ul style="list-style-type: none">• Frequency counter.• Digital audio assembly IC35 pin 9• CD test disc (PHILIPS 5A)• Digital audio assembly P306, VCXO Adjust Control (R368) |
|---|--|

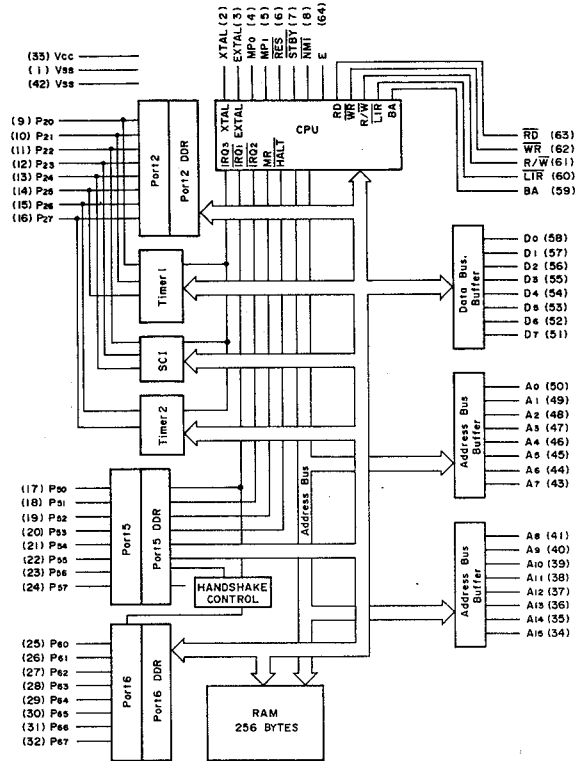
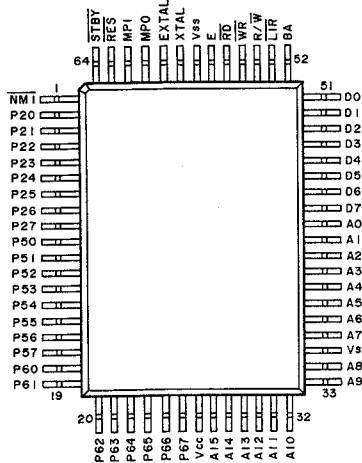
Connection diagram



- Adjustment Procedure
1. Play the CD (5A).
 2. Adjust R368 on the Digital audio assembly to set the reference clock to 11.2896 MHz $\pm$ 100 Hz.

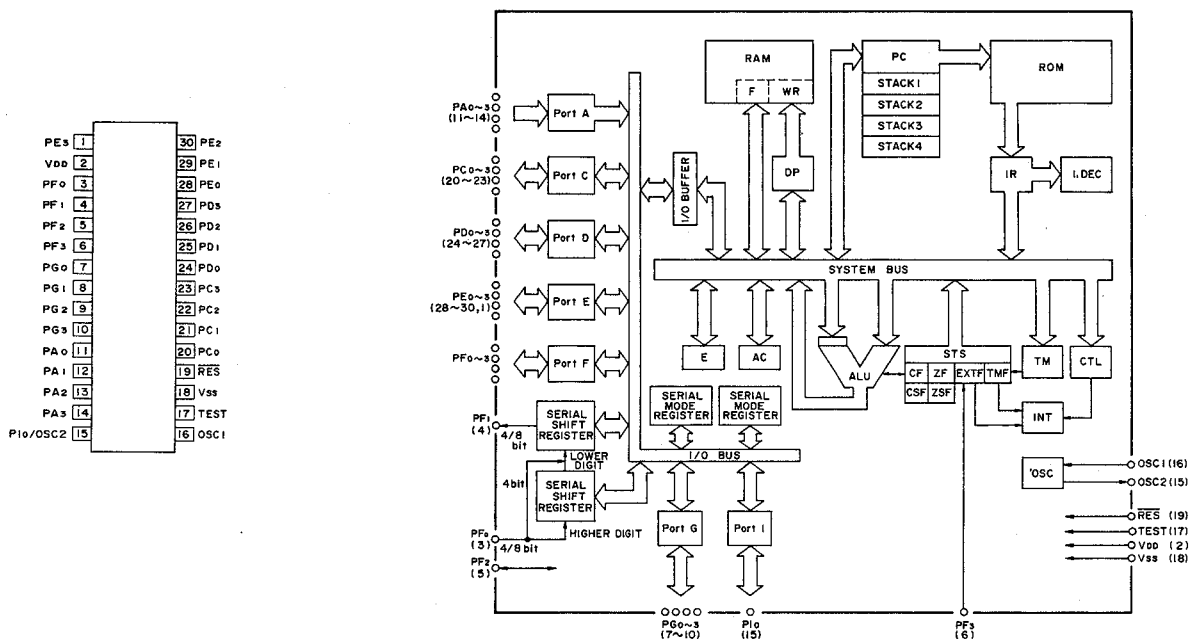
VI. μ -COM DATA

IC71: HD63B03YF (PU06-System control PCB)
(8 bit μ -COM)



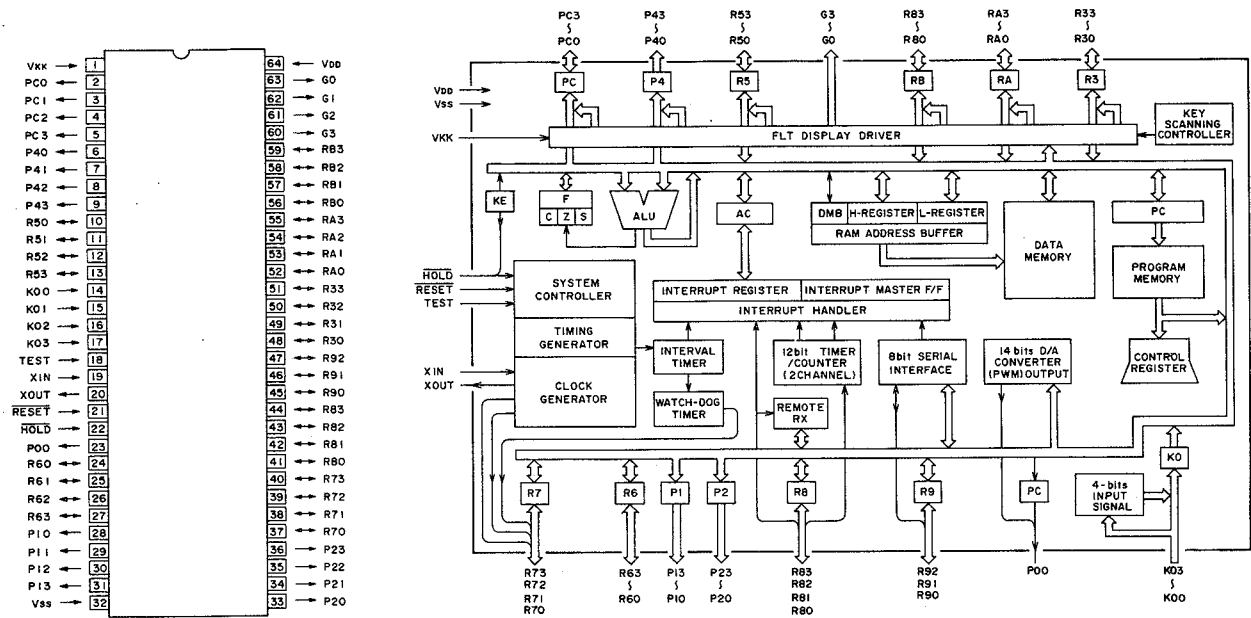
Pin No.	Pin Name	I/O	Function	Pin No.	Pin Name	I/O	Function
1	NMI	I	+5V	33	A9	O	Address
2	P20 (FLOCK)	I	Focus Lock	34	A8	O	
3	P21 ($\overline{CD}$)	O	LD/CD Select	35	VSS	—	GND
4	P22 (SCLK)	O	Serial Data Clock	36	A7	O	Address
5	P23 (SDATAIN)	I	Serial Data Input	37	A6	O	
6	P24 (SDATAOUT)	O	Serial Data Output	38	A5	O	
7	P25 (LDON)	O	Laser Diode ON/OFF	39	A4	O	
8	P26 (FTS SCAN)	O	FTS Scanning	40	A3	O	
9	P27 (T-CROSS)	I	Tracking Cross	41	A2	O	
10	P50 (V-SYNC)	I	Vertical Synchronization	42	A1	O	
11	P51 (FG)	I	Spindle Frequency Generator	43	A0	O	
12	P52 (JTRG)	O	Jump Trigger	44	D7	I/O	Expander Data Bus
13	P53 (STB2)	O	Strobe 2	45	D6	I/O	
14	P54 ($\overline{ACK}$)	I	Acknowledge	46	D5	I/O	
15	P55 ($\overline{IRQ}$)	I	Interrupt Request	47	D4	I/O	
16	P56 (SCOR)	I	Sub Code Sync.	48	D3	I/O	
17	P57 (ATN2)	I	Attention 2	49	D2	I/O	
18	P60 (D0)	I/O	μ -Com. Data Bus	50	D1	I/O	
19	P61 (D1)	I/O		51	D0	I/O	
20	P62 (D2)	I/O		52	BA	—	Not Used
21	P63 (D3)	I/O		53	LIR	—	Not Used
22	P64 (D4)	I/O		54	R/W	O	Read/Write
23	P65 (D5)	I/O		55	WR	O	Write
24	P66 (STB1)	O	Strobe 1	56	RD	—	Not Used
25	P67 (ATN1)	O	Attention 1	57	E	O	System Clock
26	VCC	—	+5V	58	VSS	—	GND
27	A15	O	Address	59	XTAL	—	Clock (4 MHz)
28	A14	O		60	EXTAL	I	
29	A13	O		61	MP0	I	+5V
30	A12	O		62	MP1	I	0V
31	A11	O		63	RES	I	Reset
32	A10	O		64	STBY	I	+5V

IC31: LC6543H (P306-Digital audio PCB)
(4 bit μ -COM)



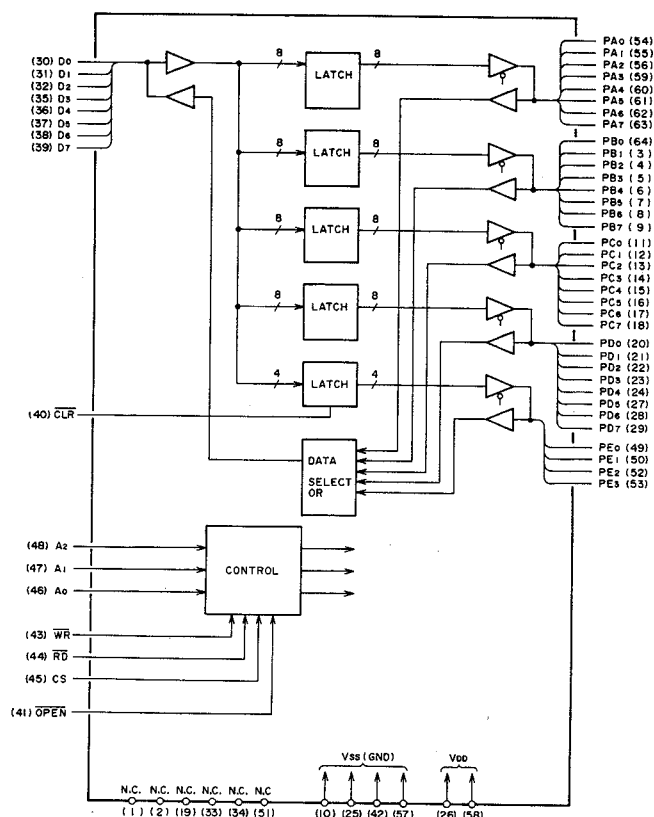
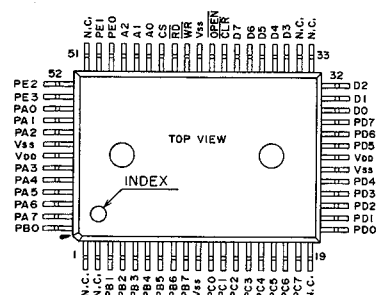
Pin No.	Pin Name	I/O	Function	Pin No.	Pin Name	I/O	Function
1	PE3 (SCOR)	O	Sub Code Sync.	16	OSC1	I	X'tal In
2	VDD	—	+5V	17	TEST	—	Not Used
3	PF0 (QDATA)	I	Q-Data	18	VSS	—	GND
4	PF1 (QRA)	I/O	Q-ch, Request and ACK	19	RES	I	Reset
5	PF2 (QCL)	O	Q-clock	20	PC0	—	Not Used
6	PF3 (ATN2)	I	Attention 2	21	PC1 (ACK)	O	Acknowledge
7	PG0 (D0)	I/O	} μ -Com. Data Bus	22	PC2	—	Not Used
8	PG1 (D1)	I/O		23	PC3 (STB2)	I	Strobe 2
9	PG2 (D2)	I/O		24	PD0 (A/D)	O	Analog/Digital Select
10	PG3 (D3)	I/O		25	PD1 (RSEL)	O	R-ch Select
11	PA0 (D4)	I/O		26	PD2 (LSEL)	O	L-ch Select
12	PA1 (D5)	I/O		27	PD3 (LD/CD)	O	LD/CD Select
13	PA2 (CRI)	O	Counter Reset Inhibit	28	PE0 (MUTE)	O	Mute
14	PA3 (SSM)	O	Start/Stop Motor Input	29	PE1 (ATT)	O	Attenuation
15	PI0/OSC2	O	X'tal Out	30	PE2 (CDROM)	O	CD-ROM

IC99: TMP47C670 (PF06-Front PCB)
(4 bit μ -COM)



Pin No.	Pin Name	I/O	Function	Pin No.	Pin Name	I/O	Function
1	VKK	—	—33V	33	P20	—	Not Used
2	PC0	—	Not Used	34	P21	—	
3	PC1	—		35	P22	—	
4	PC2	—		36	P23	—	
5	PC3	—		37	R70	O	Power Standby
6	P40	—		38	R71 (WT0)	O	Watch-dog
7	P41	—		39	R72	I/O	D4 } μ -Com. Data Bus
8	P42	—		40	R73	I/O	
9	P43	—		41	R80	I	IR Receiver
10	R50	—		42	R81	I	FTD Select
11	R51	—		43	R82	—	Not Used
12	R52	I	FTD Select	44	R83	I	Mode Select
13	R53	I	FTS Select	45	R90	—	Not Used
14	K00	I	Key in 0	46	R91	—	Not Used
15	K01	I	Key in 1	47	R92	—	Not Used
16	K02	I	Key in 2	48	R30	O	Acknowledge
17	K03	I	Key in 3	49	R31	I	Strobe 2
18	TEST	I	Test	50	R32	I	Attention 2
19	XIN	I	X'tal In	51	R33	—	Not Used
20	XOUT	O	X'tal Out	52	RA0	—	
21	RESET	I	Reset	53	RA1	—	
22	HOLD	—	Not Used	54	RA2	—	
23	P00	O	Reset-U (Main μ -Com.)	55	RA3	—	
24	R60	I/O	D0 } μ -Com. Data Bus	56	RB0	—	
25	R61	I/O		57	RB1	—	
26	R62	I/O		58	RB2	—	
27	R63	I/O		59	RB3	—	
28	P10	O	Key Out 4	60	G3	—	
29	P11	O	Key Out 5	61	G2	—	
30	P12	O	Key Out 6	62	G1	—	
31	P13	O	Key Out 7	63	G0	—	
32	VSS	—	GND	64	VDD	—	+5V

**IC78: CXD1095Q (PU06-System control PCB)
(Expander)**



Pin No.	Pin Name	I/O	Function	Pin No.	Pin Name	I/O	Function
1	N.C.	—	Not Used	33	N.C.	—	} Not Used
2	N.C.	—	Not Used	34	N.C.	—	
3	PB1 (ROTC1)	O	Rotary Encoder Control 1	35	D3	I/O	} Expander Data Bus
4	PB2	—	Not Used	36	D4	I/O	
5	PB3 (MOTRES)	O	Motor Reset	37	D5	I/O	
6	PB4 (ANTSW)	O	Antenna Switch	38	D6	I/O	
7	PB5 (CHRSTB)	O	Character Strobe	39	D7	I/O	} +5V
8	PB6 (INTVID)	O	Internal Video	40	CLR (VDD)	—	
9	PB7 (TOGL)	O	Trick Play Toggle	41	OPEN (RES)	I	
10	VSS (GND)	—	GND	42	VSS	—	
11	PC0 (LMOT1)	O	Loading Motor Control 1	43	WR	I	Write
12	PC1 (LMOT2)	O	Loading Motor Control 2	44	RD	I	Read
13	PC2 (CX)	O	CX ON/OFF	45	CS	I	Chip Select
14	PC3 (N/P)	O	NTSC/PAL	46	A0	I	} Address
15	PC4 (ANA-MUTE)	O	Analog Mute	47	A1	I	
16	PC5 (SCAN)	O	Scan Control	48	A2	I	
17	PC6 (CE)	O	Chip Enable (LCD Driver)	49	PE0 (CAV/CLV)	O	CAV/CLV Select
18	PC7 (INH)	O	Inhibit (LCD Driver)	50	PE1 (LATCH)	O	Latch
19	N.C.	—	Not Used	51	N.C.	—	Not Used
20	PD0 (B0)	O	Video Disc/Reference	52	PE2 (RNW)	O	Read/Write Select
21	PD1	—	Not Used	53	PE3 (ERF)	I	Error Flag
22	PD2 (T/M)	O	Through/Memory	54	PA0 (POS1)	I	Position Sensor 1
23	PD3 (WRE)	O	Write Enable	55	PA1 (POS2)	I	Position Sensor 2
24	PD4 (CLR-BACK)	O	Color Back	56	PA2	—	Not Used
25	VSS	—	GND	57	VSS	—	GND
26	VDD	—	+5V	58	VDD	—	+5V
27	PD5 (CDV)	O	CDV Select	59	PA3 (PARK)	I	Park Switch Input
28	PD6 (S/P)	O	Search/Play Select	60	PA4 (ROTB)	I	Rotary Encoder Input B
29	PD7 (SW)	O	H-sync/Tracking Cross Select	61	PA5 (ROTA)	I	Rotary Encoder Input A
30	D0	I/O	} Expander Data Bus	62	PA6 (CHRBUSY)	I	Character Busy
31	D1	I/O		63	PA7 (DSSENS)	I	Disc Sensor Input
32	D2	I/O		64	PB0 (ROTC2)	O	Rotary Encoder Control 2

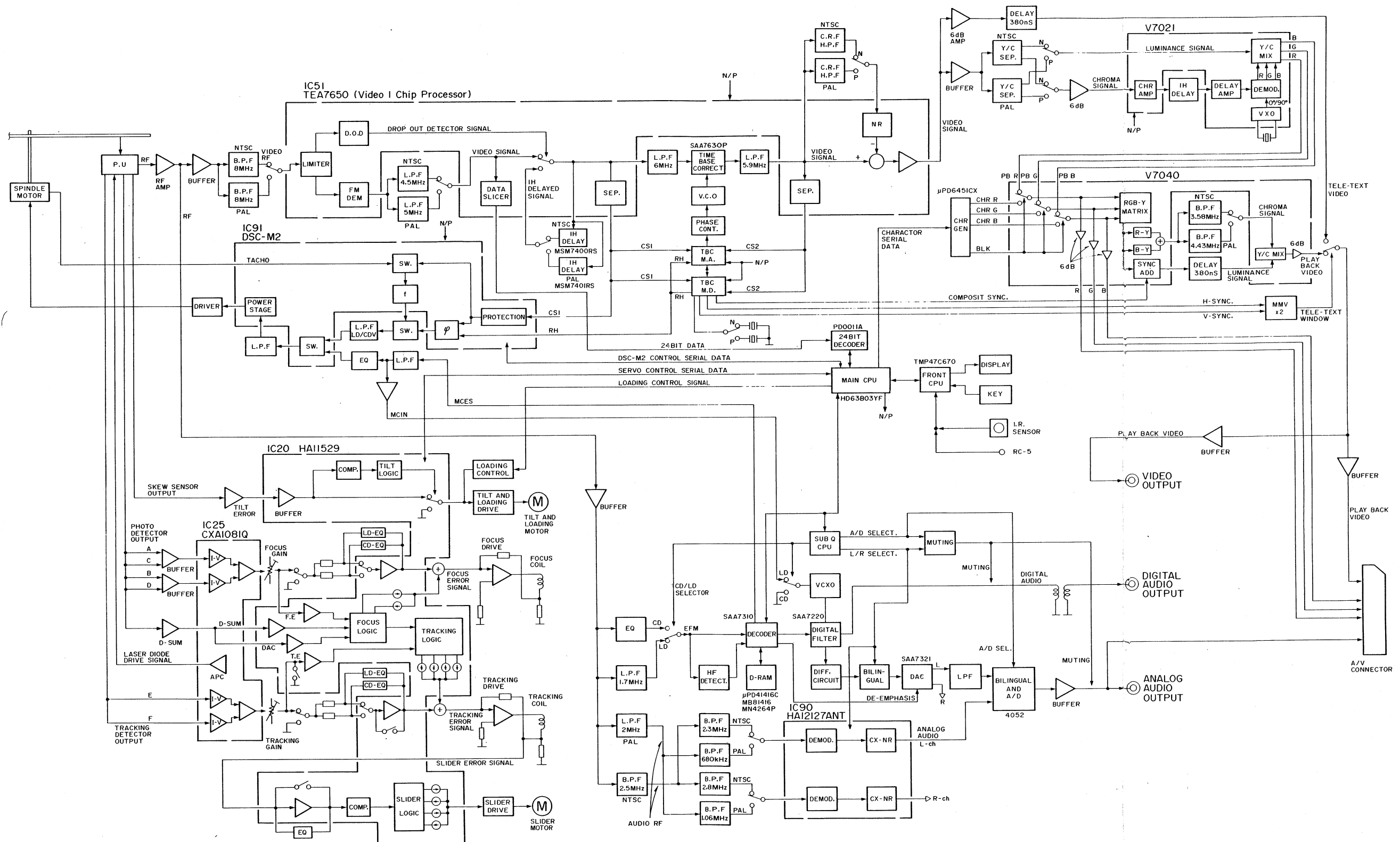
VII. ABBREVIATION LIST

24DATA	24-bits Data	COMPAR	Comparator
A/D	Analog/Digital Select	CPU	Central Processing Unit
A-AUDIO	Analog Audio	C.R.F	Croma Rejection Filter
AC	Accumulator	CRI	Counter Reset Inhibit
ACC	Automatic Color Control	CS	Chip Select
ACK	Acknowledge	CSI	Composite Sync.
ACK	Automatic Color Killer	CSYNC	Composite Sync.
ADD, SUB SW	Addition, Subtraction Switch	CTL	Control Register
ALT PLS	Line Alternate Pulse	CUP	Capacitor Up
AM	Additional Mute	CV	Composite Video Signal
ANTSW	Antenna Switch	CVBS	Composite Video Burst Signal
AOL	L-ch Output	CWB1,2	External Loop Filter
AOR	R-ch Output	CX	CX Noise Reduction
APC	Automatic Power Controller	CX-NR	CX Noise Reduction
APC	Automatic Phase Control	D.O.D	Drop-out Detector
ASY	Automatic Asymmetry Control	D-OUT	Digital Output
ATN	Attention	D-RAM	Dynamic Random Access Memory
ATSB	Attenuation	D-SUM	Detector Sum Level
ATT	Attenuate	D1,2	2-bits Setting for The Commutation Block
B.P.F	Band-pass Filter	DAAB	Data
B.R.F	Band-rejection Filter	DABD	Data
B&W	Black & White	DAC	Detector Sum AC
BA	Bus Available	DAN	Drive-A, Negative
BCK	Bit Clock	DAP	Drive-A, Positive
BF	Burst Flag	DATA REQ	24-bits Data Request
BINPC	Input a B Color Signal from Personal Computer	DBN	Drive-B; Negative
BINTV	Input a B Color Signal from TV	DBP	Drive-B; Positive
BLK PLS	Blanking Pulse	DDR	Data Direction Register
BO	Data Bus	DEEM	De-emphasis Output
BSET	Brake Current Setting	DEM	Demodulator
BULDET	Burst Limiter and Detector	DEMO L	L-Channel Demodulator
BUS CON	Bus Control	DEMO R	R-Channel Demodulator
B/W	Black and White	DEMODO	Demodulator
C IN (OUT)	Chroma Signal Input (Output)	DET	Detector
C SYNC	Composite Sync.	DIN	Serial Data Input
CAS	Column Address Select	DINT	Data Interpolated Input
CAV	Constant Angular Velocity	DL AMP	Delay Line Amp.
CAV/CLV	CAV/CLV Select	DLA IN	Delay Line Amp. Input
CB	Color Burst	DOB	Drop-out Not Input
CCD 453 ST	CCD 453 Stage	DOS	Drop-out Sense
CD	Compact Disc	DOUT	Data Output
CD/LD	CD/LD Select	DP	Data Pointer
CDO	Capacitor Down	DREQ	Data Request
CDROM	CD-ROM	DRQ	24-bits Data Request
CDV	Compact Disc Video	DSENSE	Disc Sensor Input
CE	Chip Enable	E	System Clock
CHR SEP	Chroma Separator	E	E-Register
CHRBUSY	Character Busy	EFAB	Error Flag
CHRCLK	Character Generator Clock	EFAS	Error Flag A-Chip (Decoder) to Servo
CHRDAT	Character Data	EFL	Enable Frequency Loop
CHRDAT	Character Data	EFM	8-14 Modulation
CHROUT	Chroma Output	EI	E-Amp. Input
CHRSTB	Character Strobe	EO	E-Amp. Output
CIRC	Cross-Interleaved Reed-Solomon Code	EQ	Equalizer
CLAB	Clock	ERF	Error Flag
CLBD	Clock	ESTOP	Emergency Stop
CLK	Clock Input	ETL	Enable Tacho Loop
CLP	Clamp	EXTAL	External Clock Input
CLR	Clear	F44	Clock Output (f-sub)
CLV	Constant Linear Velocity	F75	Clock Input (7.5MHz)
COMP	Clock Duty Defect	F75	System Clock
COMP	Comparator	F88	Clock Output (2 x f-sub)
		FB	Feedback

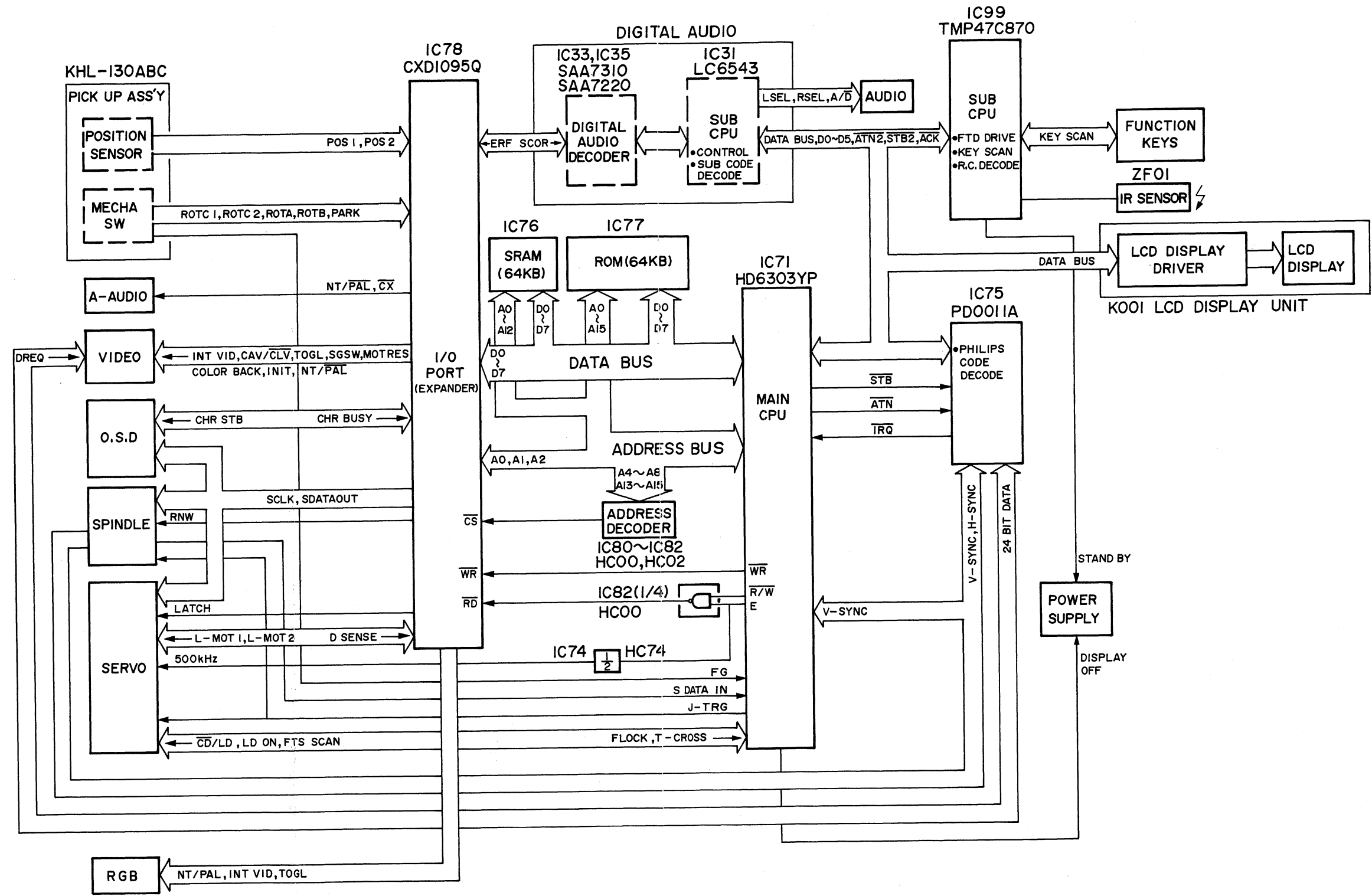
FCD	Focus Error Amp. CD Input	MEPIB	Measurement Point In The Burst
FE	Focus Error	MFE	Motor Frequency Error
FEBIAS	Focus Error Bias	MH	Protected Horizontal Sync.
FEG	Focus Error Gain Amp. Input	MIRR	Mirror Comparator Output
FEGA	Focus Error Gain Amp. Output	MIX-A	Mix Audio Signal
FF	Flip Flop	MIXAUD	Mix Audio Signal
FG	Spindle Frequency Generator	MOTRES	Motor Reset
FIAT	Burst Fiat	MP0	Mode Program 0
FL	Focus Lock	MP1	Mode Program 1
FLD	Focus Error Amp. LD Input	MPE	Motor Phase Error
FLOCK	Focus Lock	MPLL	Motor in Frequency Control Range
FM DEM	FM Demodulator	MS	Multi-Standard Input
FOCS	Focus	MSC	Motor Speed Control
FOCS-D	Focus Drive	MTF	Modulation Transfer Function
FOCS-R	Focus Return	MUSB	Mute
FOK	Focus OK	MV	Protected Vertical Sync.
FOST	Focus Error Amp. Offset Adjust	NR	Noise Reduction
FPO	Focus OP-Amp. Output	N/P	NTSC/PAL
FSC	Sub-carrier Frequency	O.S.D	On-screen Display
FTD	Fluorescent Tube Display	OC	Oscillator Control Input
FTSSCAN	FTS (Favorite Track Selection) Scanning	ODEN	Output Disable
f	Frequency	OE	Output Enable
G0 - 12	Digit 0 - 12	OSC	Oscillator
GEN	Generator	OSP	Over Speed Detection
GINPC	Input a G Color Signal from Personal Computer	OUTM	Comparator 3 Output
		OUTP	Comparator 2 Output
GINTV	Input a G Color Signal from TV	P.U	Pickup
H PLS	Horizontal Pulse	P/B DOBM	Digital Audio Output
H.P.F	High-pass Filter	P/N	P-Sub/N-Sub for Laser Diode
H-SYNC	Horizontal Synchronizing Signal	P/N	PAL/NTSC
HALF PICT	Half Picture	P/S	Play/Still
HALL A (B,C)	Input from Hall Motor	PARK	Park Switch Input
HFD	High-Frequency Detector	PC	Personal Computer
HFI	High-Frequency Input	PD	Photo Diode
HOR	Horizontal Sync.	PD	Phase Detector Output
I/O	Input/Output	PHLOCK	Phase Lock
I-V	Current/Voltage Converter	PLN	PAL/NTSC Selection Input
INIT	Reset Input	PLN	PAL/NTSC Selection
INJ	Injection Current Setting	PLOCK	Phase Locked Loop
INSW	Inside Switch	PLOCK	Motor Phase Lock Signal
INT	Interrupt	POS	Position Sensor
INTVID	Internal Video	POSCNT	Position Control
INV	Inverter	POWSTB	Power Stand-by
IR SENSOR	Infrared Sensor	PR1 - 4	Tacho Pulse Divider
IREF	Current Reference	PRE-FIFO	Pre Fast In Fast Out
IRQ	Interrupt Request	PRES	Preset
ISCT	Internal Current Setting	PWM	Pulse Width Modulation
J-TRG	Jump Trigger	Q-DATA	Q-Channel Data
JUMP	Jump Trigger Input	QCL	Q-Channel Clock
KEYINO	Key In, 0	QRA	Q-Channel Request Input/Acknowledge Output
L.P.F	Low-pass Filter		
L-MOT	Loading Motor Control	R/W	Read/Write Select
LD	Laser Diode	R/W	Read/Write
LD	Laser Disc	RAMP	Adjust for Ramp of Up-Down Signal
LDON	Laser Diode ON/OFF	RAS	Row Address Select
LE	Latch Enable	RC DECODE	Remote Control Code Decode
LIM	Limiter	RD	Read
LIR	Load Instruction Register	REF0 - 6	7-bits Reference Rotation Speed
LSEL	Left Channel Select	REFN	Reference Selection
M.A	Measurement Analog	REG	Regulator
M.D	Measurement Digital	RESETu	Reset of u-processor
MCES	Motor Control Error Signal	REV	Reverse Speed Detection
MCIN	Motor Control Error Signal Input	RF-	RF Summing Amp.-Input
MECHA SW	Mechanism Switch		

RFO	RF Summing Amp. Output	TD1,2	2-bits to Set The Slope of The Current Limiter
RFA	RF (Audio)	TDR	Tracking Brake Drive Output
RFAV	RF (Audio/Video)	TE	Tracking Error
RH	Reference Horizontal	TGS	Tracking Gain Switching
RH1	Horizontal Line Video Reference Signal	THRU VIDEO	Through Video
RINPC	Input an R Color Signal from Personal Computer	TIDR	Tilt Drive Signal
RINTV	Input an R Color Signal from TV	TIPI	Tilt OP-Amp. Input
RLS	Radial Loop Switch	TIPO	Tilt OP-Amp. Output
RNW	Read/Write Select	TLD	Tracking Error Amp. LD Input
ROM	Read Only Memory	TM	Timer
ROTA	Rotary Encoder Input A	TO1,2	Current Limiter (Accelerate or Brake)
ROTB	Rotary Encoder Input B	TOC	Table of Contents
ROTC	Rotary Encoder Control	TOGL	Trick Play Toggle
RSEL	Right Channel Select	TOK	Tacho-OK Signal
RST	Reset	TP ADJ	Adjust The Burst Flag Position
S/H	Sawtooth and Sample and Hold	TPO	Tracking OP-Amp. Output
S/P	Still/Play	TRKG	Tracking
S-COMP	Slider Comparator	TRKG-D	Tracking Drive
S-TERMINAL	Super Video Output Terminal	TRKG-R	Tracking Return
S-VIDEO	Super Video	TSET	Tilt Comparator Setting
S1 – S6	Analog Switch	TSTB	Test Control Input
SBK	Set Burst Key	UPDN	Lens Up-Down Output
SC	Sub-carrier	V.C.O	Voltage Controlled Oscillator
SCA	A/V Connector, Audio Output	V-SYNC	Vertical Synchronizing Signal
SCAB	Sub-coding Clock	VBL	Back Level
SCI	Serial Clock Input	VBLK	Vertical Blanking Signal
SCKN	Data-Clock Input	VCAL	Voltage Controlled Amplifier, L-ch
SCLK	Serial Data Clock	VCAR	Voltage Controlled Amplifier, R-ch
SCOR	Sub-code Synchronization	VCL	Character Level
SDAB	Sub-coding Data	VCXO	Voltage Controlled X'tal Oscillator
SDATA	Serial Data	VDC/2	Reference Voltage Capacitor Pad
SDATAIN	Serial Data Input	VDD/2	Reference Voltage Capacitor Pad
SDATAOUT	Serial Data Output	VDDA	Supply Voltage (Analog)
SDC	Sandcastle	VER	Vertical Sync.
SDR	Slider Drive Signal	VHLF	Half-Luminance Input Color Encoder
SEG a – j	Segment a – j	VID IN	Video Input
SEP	Synchronizing Signal Separator	VIDMOD	Video Modulator
SGSW	Signal Generator Switch	VIDOUT	Video Signal to Output Connector
SI	Selects Superimposition	VIDEO RGB	Video Signal to RGB Circuit
SLD-DRV	Slide Motor Drive	VIDSCA	Video Signal to A/V Connector
SLP	Slope Setting	VIDY/C	Video Y/C Signal
SLPI	Slider OP-Amp. Input	VMON	Character Monitor Terminal
SLPO	Slider OP-Amp. Output	VOB	Voltage Auto Bias
SP	Set Plateau Key	VP	Supply Voltage
SSM	Start/Stop Motor Input	VREF	Reference Voltage Output
ST	Scan Trigger Pulse	VSSA	Analog Ground
STB	Strobe	VVL	Video Level
STBSW	Standby Switch	VXO	Voltage Controlled X'tal Oscillator
STBY	System Stand-by	WM	Window for Measuring
STS	Status Register	WR	Write
SUB Q	Sub-code Q-Data	WS	Word Select
SW1 – 4	System Select Switch	WSAB	Word Select
SWAB	Sub-coding Word Clock Output	WSBD	Word Select
SWT	Internal Clock Divided by 256	WTO	Watch-dog Timer Output
T-CROSS	Tracking Cross	XSYS	System Clock Output
T&L-DRV	Tilt & Loading Motor Drive	XTAL	Crystal Oscillator
TADC	Tacho Input for DC Motor	Y IN (OUT)	Y Signal Input (Output)
TBC	Time Base Corrector	YH	Y Signal Halftone
TBCERR	Time Base Correction Error	Y MIX	Y Signal Mix
TC	Time Constant	YS	Y Signal Superimpose
TCD	Tracking Error Amp. CD Input	ZRPM	Zero Rotation Detection
TCNT	Track Count	φ	Phase

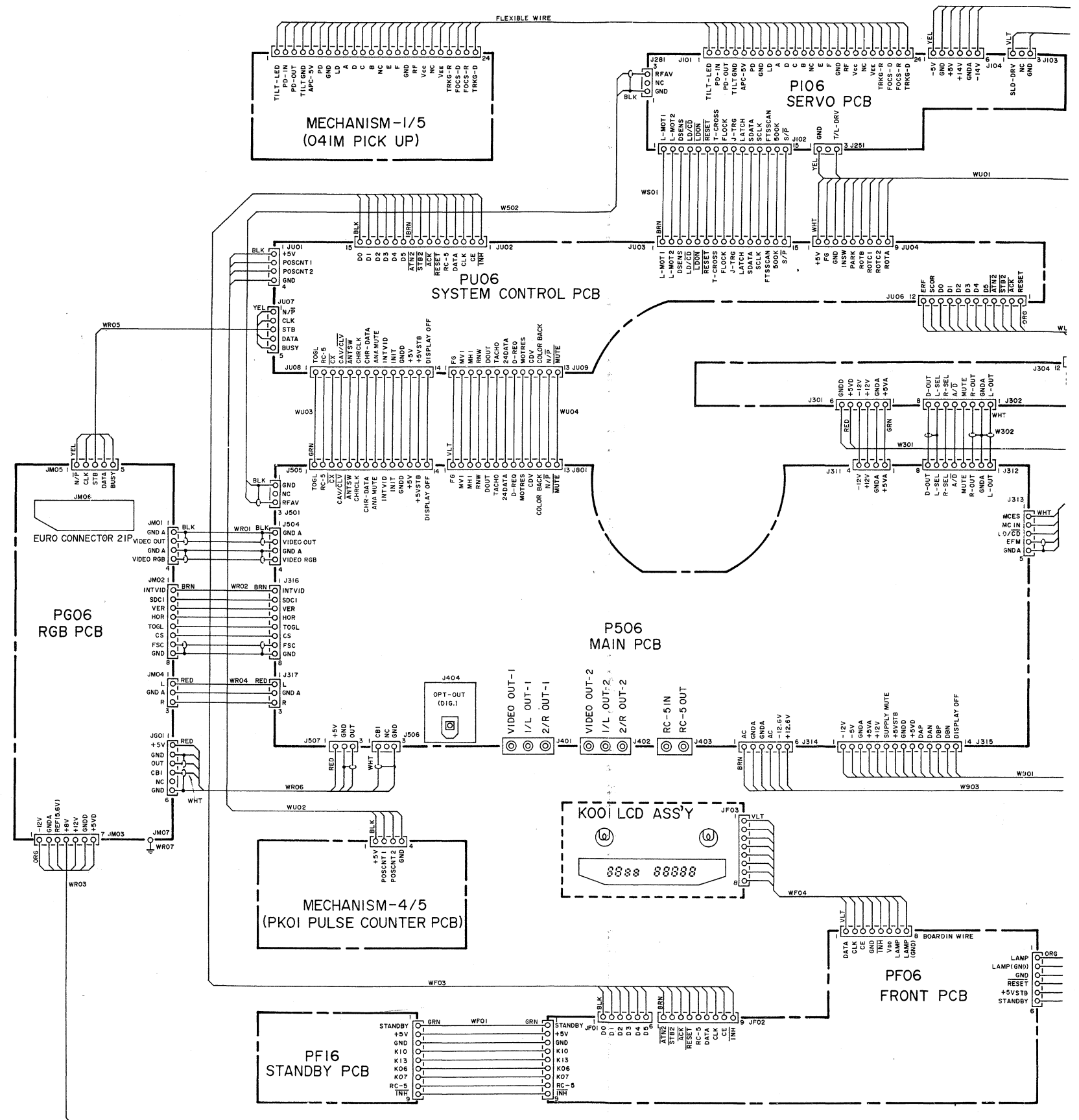
VIII. BLOCK DIAGRAMSA. CIRCUIT BLOCK DIAGRAM

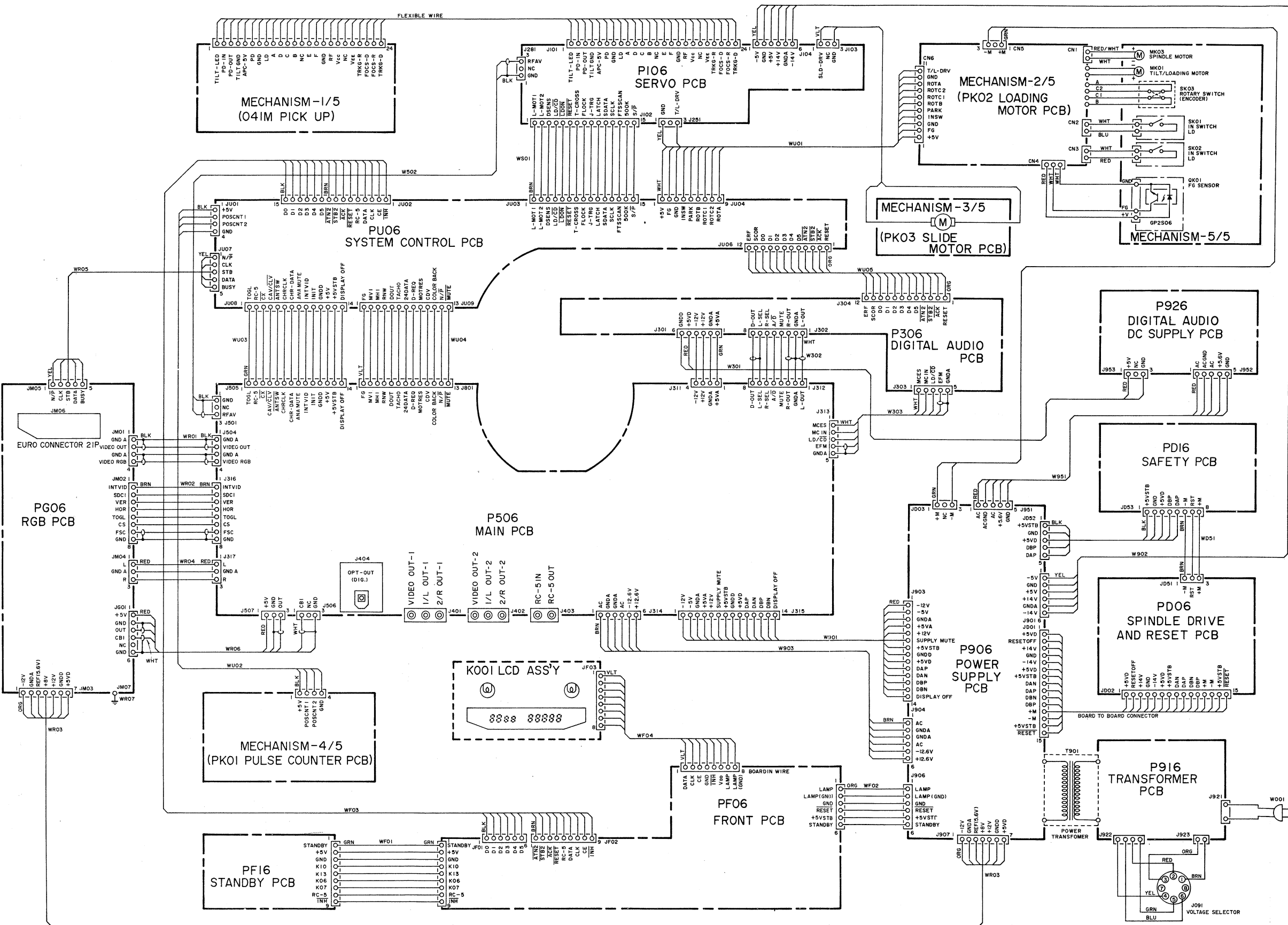


B. SYSTEM CONTROL BLOCK DIAGRAM



IX. WIRING DIAGRAM.

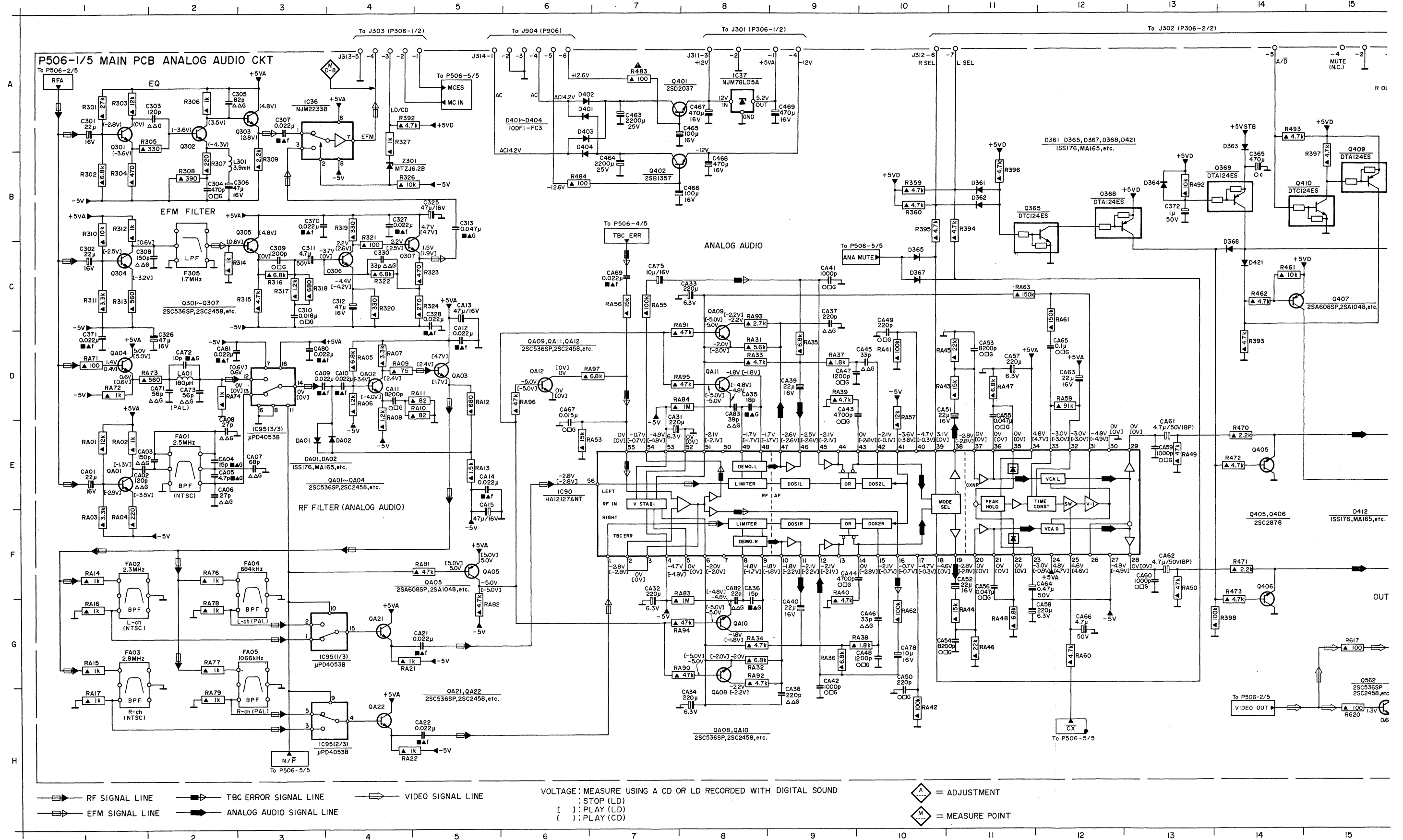


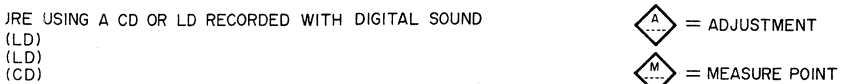


X. SCHEMATIC DIAGRAMS AND P.C.BOARDS

A. P506 MAIN ANALOG AUDIO SCHEMATIC DIAGRAM

C301 A1	C311 C3	C371 D1	C468 B8	CA03 E1	CA13 C5	CA36 F8	CA46 G10	CA56 F11	CA66 G12	CA82 F8	DA02 A6	FA03 G1	L411 E16	Q365 B11	Q561 G16	QA11 D8	R307 B2	R317 C3	R356 B10	R398 G14	R470 E14	R516 G17	RA03 F1	RA
C302 C1	C312 C4	C372 B3	C469 A9	CA04 E2	CA14 E5	CA37 C9	CA47 D9	CA57 D11	CA67 D6	CA83 D8	DA03 A6	FA04 F3	L401 D2	Q366 B12	Q562 G15	QA12 D6	R308 B2	R318 C3	R357 B10	R399 G16	R471 F14	R517 G15	RA04 F1	RA
C303 A2	C313 B5	C458 B17	C616 G16	CA05 E2	CA15 E5	CA38 H9	CA48 G10	CA58 G12	CA68 C7	D361 B11	DA04 A6	FA05 G3	Q301 A1	Q369 B14	Q563 G15	QA21 G4	R309 B3	R319 B4	R358 B10	R461 C14	R472 E14	R518 G16	RA05 F1	RA
C304 B2	C314 B5	C459 C17	C617 G16	CA06 E2	CA16 E5	CA39 D9	CA49 C10	CA59 E13	CA69 C7	D362 B11	DA05 A6	FA06 G3	Q302 A2	Q370 B14	Q564 G15	QA22 G4	R310 B3	R320 C4	R359 A17	R462 C14	R473 F14	R519 G16	RA06 D4	RA
C305 A2	C315 B5	C460 D17	C618 G16	CA07 E3	CA17 E5	CA40 G9	CA50 G10	CA60 F13	CA70 D2	D363 B11	DA06 A6	FA07 G3	Q303 A3	Q371 B14	Q565 G15	QA23 G4	R311 C1	R321 B4	R360 B10	R463 C14	R474 F14	R520 G16	RA07 D4	RA
C306 B2	C316 B5	C461 A7	C619 H16	CA08 E2	CA18 E7	CA41 C9	CA51 D11	CA61 F13	CA71 D2	D364 B13	DA07 E3	IC90 E6	Q304 C1	Q372 B14	Q566 G15	QA24 G4	R312 B1	R322 C4	R361 B10	R464 E17	R484 B6	R521 H16	RA08 D4	RA
C307 A3	C317 C5	C462 C5	C620 H16	CA09 D3	CA19 D4	CA42 G9	CA52 F11	CA62 F13	CA72 D2	D365 C10	DA08 E4	IC91 E3	Q305 B3	Q373 B14	Q567 G15	QA25 G4	R313 C1	R323 B4	R362 B10	R465 C17	R485 A14	R522 H16	RA09 D4	RA
C308 C3	C318 B4	C463 A8	C621 H16	CA10 D4	CA20 D4	CA43 D9	CA53 D11	CA63 D12	CA73 D2	D366 C14	DA09 E2	IC92 E4	Q306 C4	Q374 B14	Q568 G15	QA26 G4	R314 C2	R324 B4	R363 B10	R466 C17	R486 A14	R523 H16	RA10 D5	RA
C309 C3	C319 B4	C464 B8	C622 H16	CA11 D4	CA21 D4	CA44 F9	CA54 G11	CA64 F12	CA74 D2	D367 C14	DA10 A6	IC93 E4	Q307 C4	Q375 B14	Q569 G15	QA27 G4	R315 C3	R325 B4	R364 B10	R467 F17	R487 A14	R524 H16	RA11 D5	RA
C310 C3	C320 B4	C465 A8	C623 H16	CA12 D5	CA22 D5	CA45 D10	CA55 D11	CA65 D12	CA75 D2	D368 C14	DA11 A6	IC94 E4	Q308 C4	Q376 B14	Q570 G15	QA28 G4	R316 C3	R326 B4	R365 B10	R468 F17	R488 A14	R525 H16	RA12 D5	RA





P506-2/5 MAIN PCB, VIDEO-A CKT

N/F

To P506-5/5

FM DEMODULATOR

DE-EMPHASIS

VIDEO PROCESSOR

RF BPF

VOLTAGE MEASURE USING I5000 TRACK OF TEST DISC
IMS I.O (PAL) OR MZOOI (NTSC).
MEASURED AT STILL MODE.
IMS I.O (PAL TEST DISC)
() MZOOI (NTSC TEST DISC)

To J281 (PI06)

To P506-3/5

To P506-4/5

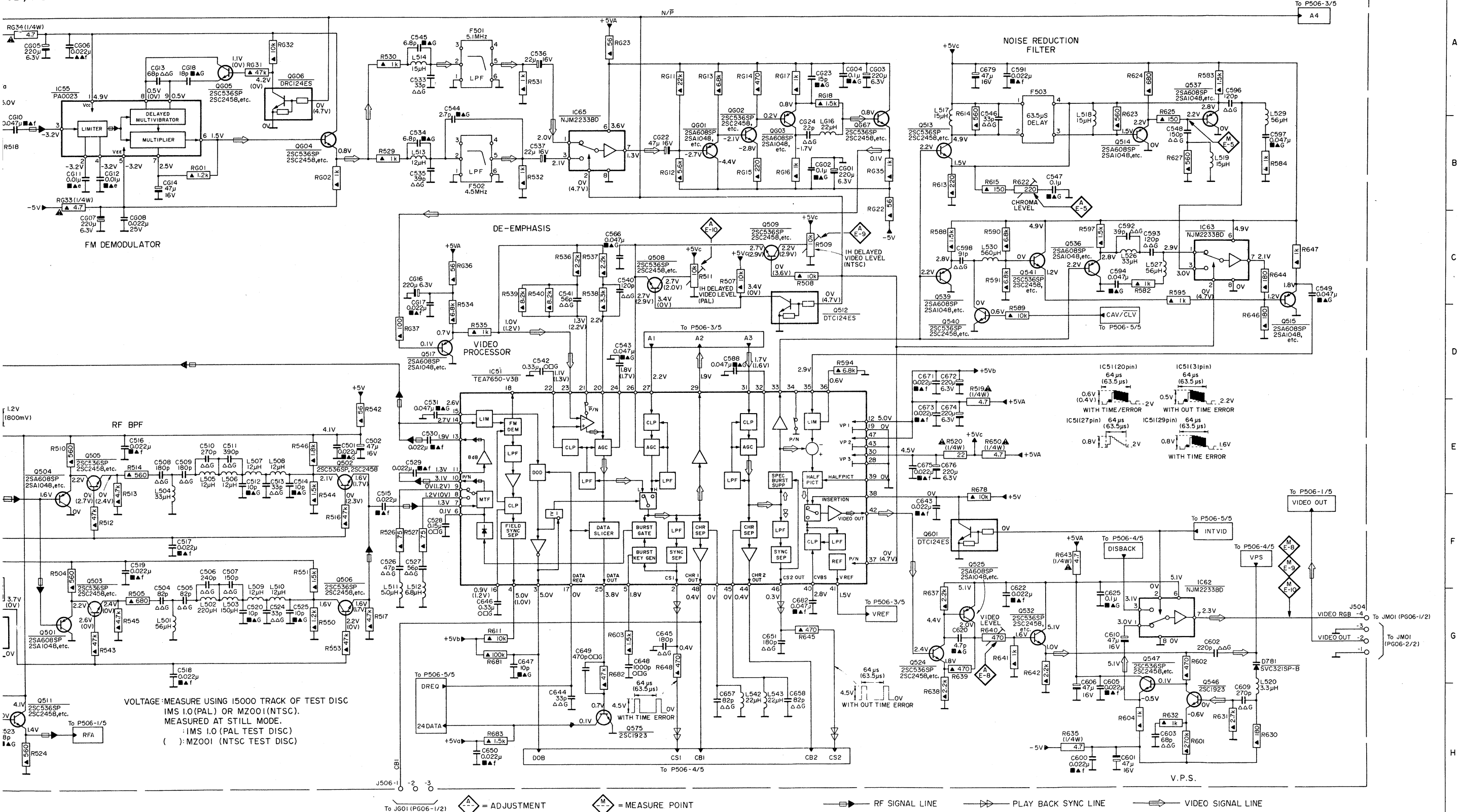
To J601 (PG06-1/2)

ADJUSTMENT

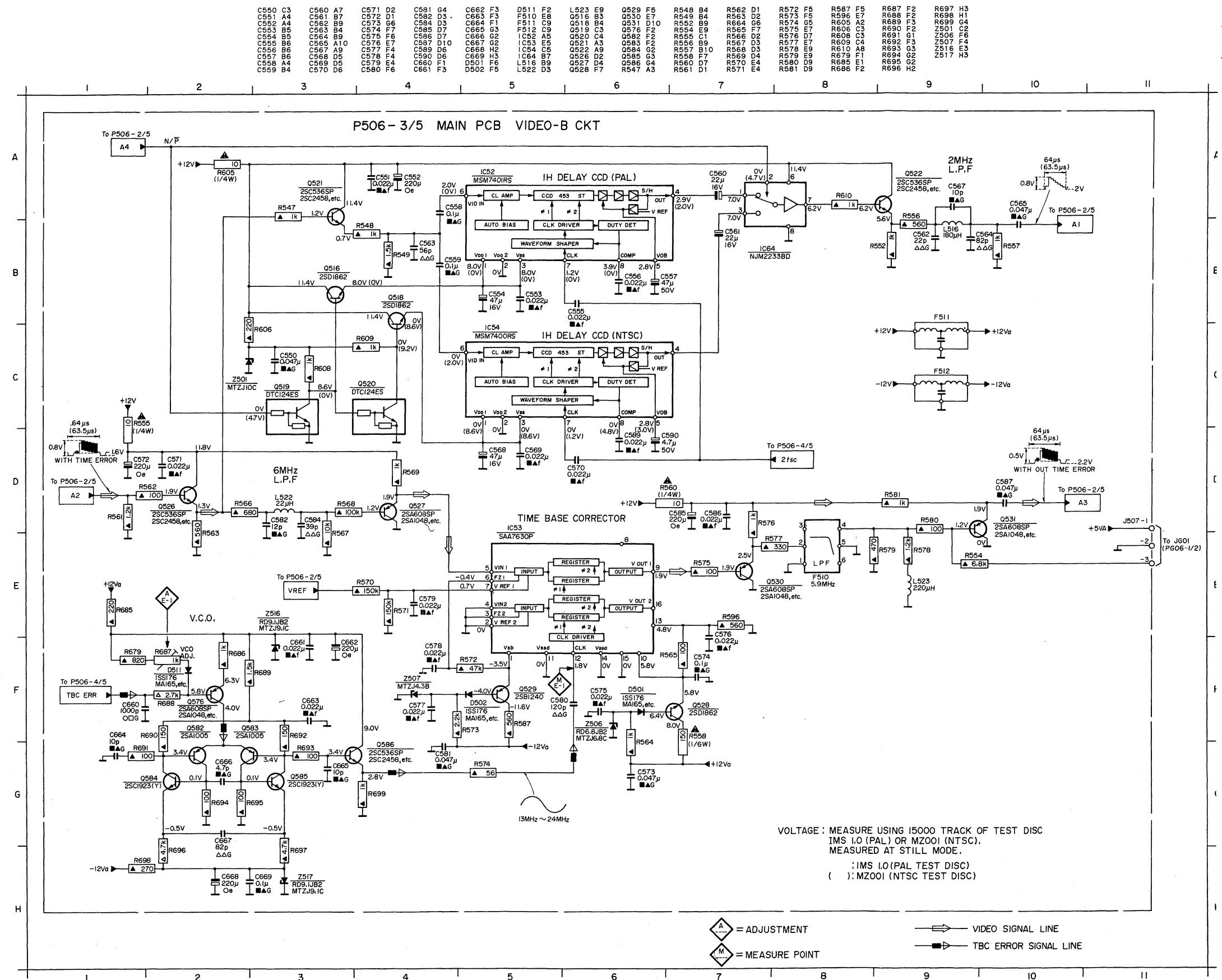
MEASURE POINT

AM

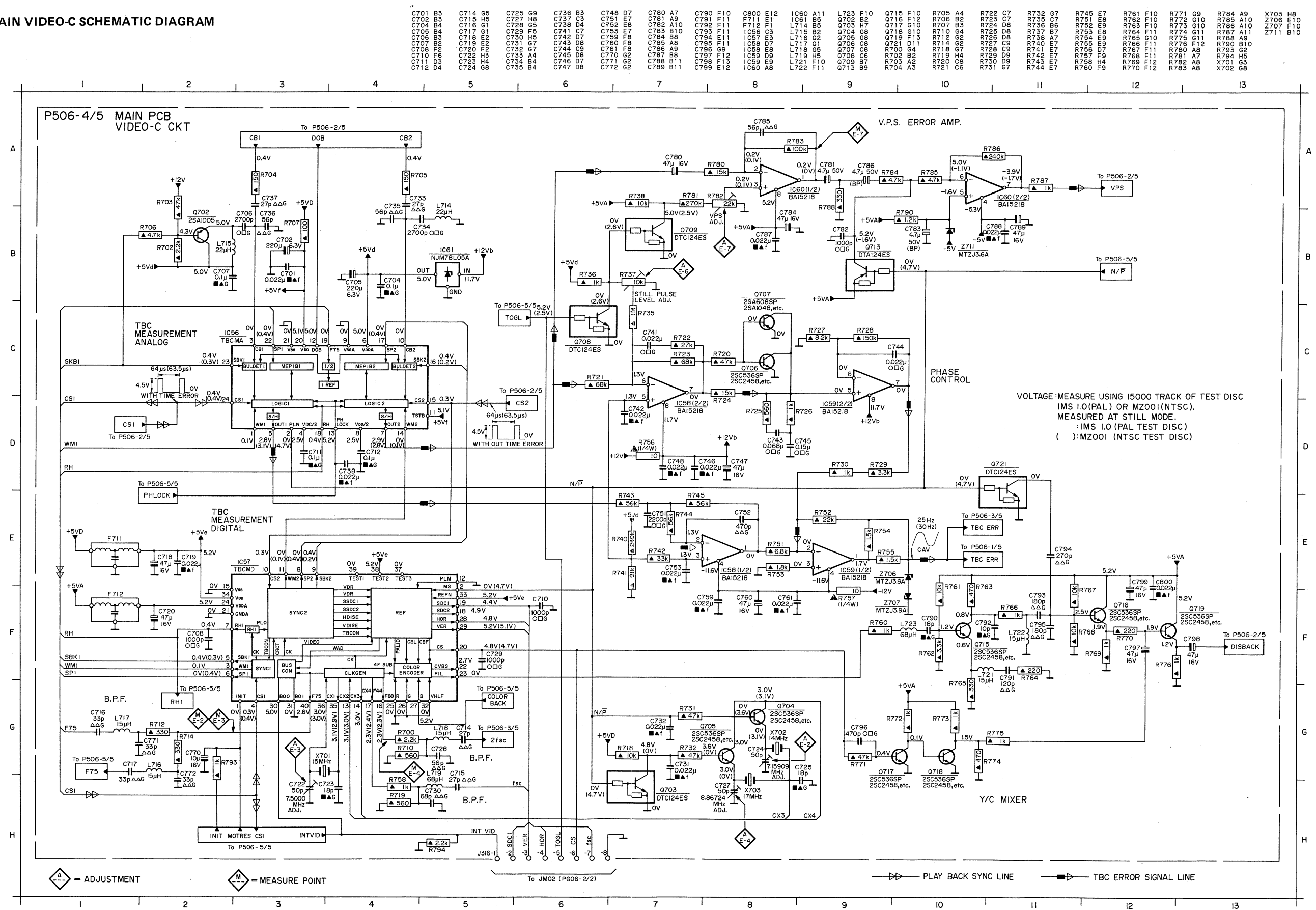
CB, VIDEO-A CKT



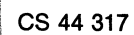
C. P506 MAIN VIDEO-B SCHEMATIC DIAGRAM



D. P506 MAIN VIDEO-C SCHEMATIC DIAGRAM



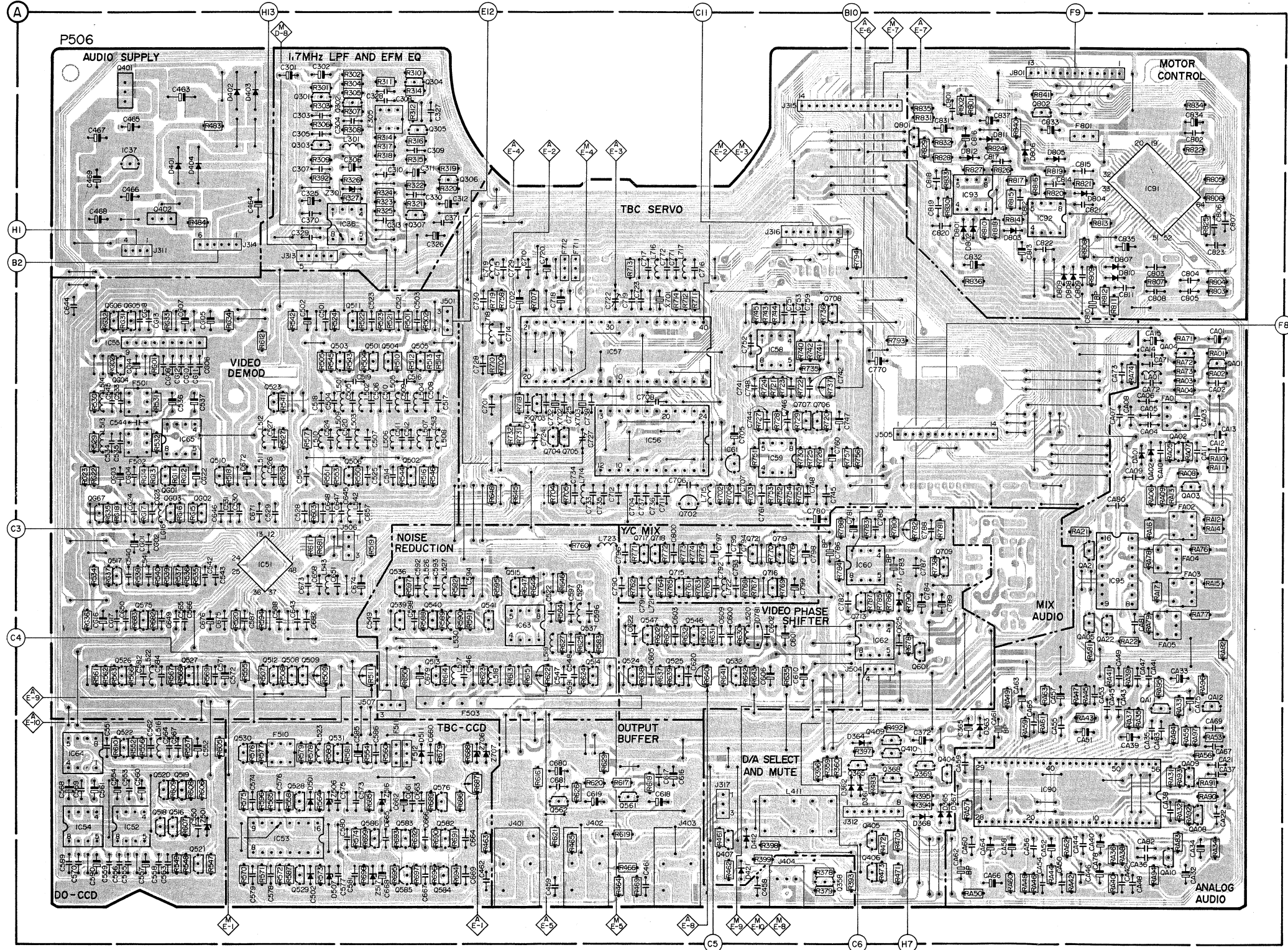
C461 G11	C810 G8	C820 H8	D801 H9	D811 F3	I935 E2	R806 E9	R816 D3	R827 F2	R840 D3
C461 C11	C811 G9	C821 C3	D802 H9	D812 F3	I935 G8	R807 E9	R817 D3	R828 F2	R841 D2
C802 B8	C812 F4	C822 D4	D803 E3	F801 C11	R801 F2	R808 F9		R829 F2	
C802 B8	C813 F4	C823 D4	D804 E3	F802 C11	R802 F2	R809 F9		R830 F2	
C804 G6	C814 C3	C831 B11	D805 C3	C191 C4	R469 G11	R810 H7	R820 D4	R831 F1	
C805 G6	C815 D5	C832 A11	D806 C3	C191 D4	R801 C11	R811 G7	R821 D5	R832 F1	
C806 C10	C816 F3	C833 D3	D807 C3	C192 D4	R802 C11	R812 G7	R822 D5	R833 F2	
C807 C10	C817 E3	C834 B8	D808 E3	F803 G8	R803 G6	R813 F9	R824 F3	R834 C9	
C808 F10	C818 E2	C835 B7	D809 E3	I932 C3	R804 G6	R814 F9	R825 C6	R835 B11	
C809 G9	C819 G8	C837 C11	D810 E3	I932 E4	R805 E9	R815 F5	R826 E3	R836 A11	



F. P506 MAIN PCB

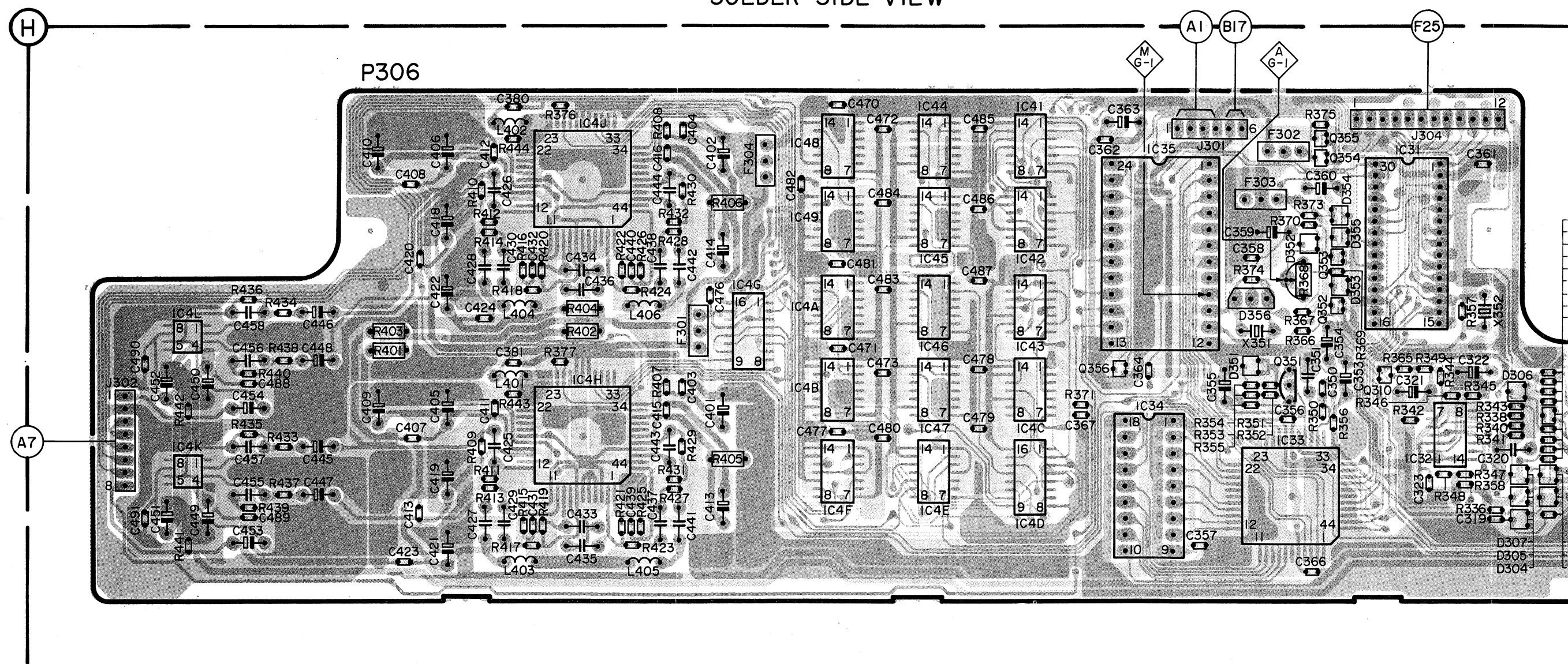
R	R623 R631~R633 R484 R483 R634 R612 R542 R392 R301~R309 R310~R318 R319~R327 R719 R758 R718 R707 R711~R714 R721~R724 R743~R745 R740~R742 R794 R835 R802 R801 R840 R841 R819~R821 R811~R813 R808 R809 R807 R834 R822 R803~R806 R529~R532 R602 R601 R518 R520 R555 R541 R527 R526 R517 R505 R545 R543 R504 R510 R521~R524 R501 R502 R710 R700 R648 R645 R732 R731 R704 R705 R771~R775 R761~R766 R702 R706 R703 R735 R720 R736 R737 R793 R826~R833 R836 R810 R824 R814~R818 RA21 RA22 RA71~RA74 R825 RA01~RA04 R622 R634 R637 R635 R636~R640 R611~R618 R619 R651 R553 R550 R519 R544 R516 R546 R512~R514 R695 R647 R644 R584 R646 R760 R583 R602 R604 R601 R630~R632 R767~R770 R776 R725~R730 R751~R757 R787 R780~R788 R790 RA81 RA76~RA79 RA15~RA17 RA05~RA14 RA42~RA48 RA31~RA34 RA95~RA97 RA53 RA52 R610 R592 R556 R557 R547~R549 R605~R609 R587 R570~R573 R574 R685 R554 R560 R679 R686~R699 R463 R616 R621 R465 R626 R629 R464 R466 R469 R461 R462 R399 R396 R379 R378 R393 R470~R473 R492 R395 R394 RA57 RA50 RA49 RA59~RA63 RA35~RA41 RA84 RA83 RA90~RA94 RA55 RA56 C589 C590 C465~C469 C618 C605~C608 C463 C466 C672 C671 C325 C502 C501 C301~C307 C328 C330 C327 C730 C715 C710 C720 C718 C722 C719 C723 C717 C772 C771 C716 C741 C748 C751~C753 C759 C742 C770 C831 C801 C837 C833 C814 C815 C821 C809~C811 C835 C861 C834 C802 C644 C545 C544 C601~C604 C610~C614 C526~C531 C464 C329 C370 C523 C313 C521 C503 C306 C312 C728 C714 C702 C736 C727 C733~C737 C712 C704 C711 C706 C705 C744 C746 C745 C760 C747 C818~C820 C832 C816 C817 C812 C813 C822 CA71~CA73 CA14 CA15 C803~C808 C823 C616 C533~C535 C624 C623 C536 C537 C622 C540~C543 C515 C504~C507 C524 C520 C508~C513 C516~C519 C326 C371 C731 C732 C725 C522 C597 C596 C796 C791 C708 C800 C797 C707 C761 C780 C786 C781 C785 C783 C787 C788 C789 CA58~CA66 CA39~CA49 CA35 CA33 CA32 CA31 CA21 CA37 C582 C584 C649 C565 C566 C676 C675 C571 C572 C643 C682 C648 C647 C645 C657 C525 C514 C585 C586 C549 C592 C594 C546 C701 C784 C547 C591 C548 C790 C622 C605 C603 C620 C792 C793 C795 C799 C798 C782 C625 C784 C372 C365 C617 C650 C568~C570 C550~C561 C567 C562~C564 C587 C588 C673 C658 C651 C674 C577~C581 C573~C576 C596 C679 C660 C668 C462 C459 C681 C680 C619 C461 C616 C618 C609 C600 C458 C606 C602 C601 C610 C604~C606 C401 IC37 C402 IC65 C510 IC51 C523 C301~C303 IC36 C304~C307 Q505 Q703~Q705 IC58 Q708 IC60 Q801 IC93 Q802 Q821 IC95 IC91 Q401~Q404 Q667 IC55 Q575 Q601 Q603 Q602 Q512 Q508 Q509 Q511 Q501 Q506 Q540 Q513 Q541 IC63 Q537 Q717 Q718 Q715 Q721 Q719 IC59 Q707 Q706 Q713 IC62 Q410 Q601 Q709 IC92 Q405 Q422 IC90 Q408~Q412 IC64 IC54 Q517 Q526 IC52 Q516 Q527 Q518~Q522 Q530 IC53 Q529 Q528 Q531 Q582~Q586 Q576 Q562 Q514 Q561 Q524 Q547 Q525 Q546 Q407 Q532 Q716 Q358 Q365 Q405 Q406 Q409 Q368 Q369 Q404 Q364 Z711 D801 D802 D812 D811 D803 D804~D806 D807~D810 D801 D802 D362 D361 D368 D365 D367 D363 F801 DA01 DA02 DA01~DA02	IC - O
D - Z	D401 D404 D402 D403 Z301 D501 D502 Z506 Z507 Z517 Z516 D511 Z706 Z707 L514 L513 F501 F502 L512 L511 L510 L509 L501~L503 L301 F305 L504~L506 L507 L508 L719 L718 X702 X703 F712 F711 L716 X701 L717 L721 L722 L520 L411 L522 L516 L516 F510 L523 L543 L542 F511 F512 L526 L527 L530 L517 F503 L518 L519 L529 L714 L723 L721 L722 L520 L411	D - Z
F - K - L - X	L514 L513 F501 F502 L512 L511 L510 L509 L501~L503 L301 F305 L504~L506 L507 L508 L719 L718 X702 X703 F712 F711 L716 X701 L717 L721 L722 L520 L411 L522 L516 L516 F510 L523 L543 L542 F511 F512 L526 L527 L530 L517 F503 L518 L519 L529 L714 L723 L721 L722 L520 L411	F - K - L - X

SOLDER SIDE VIEW



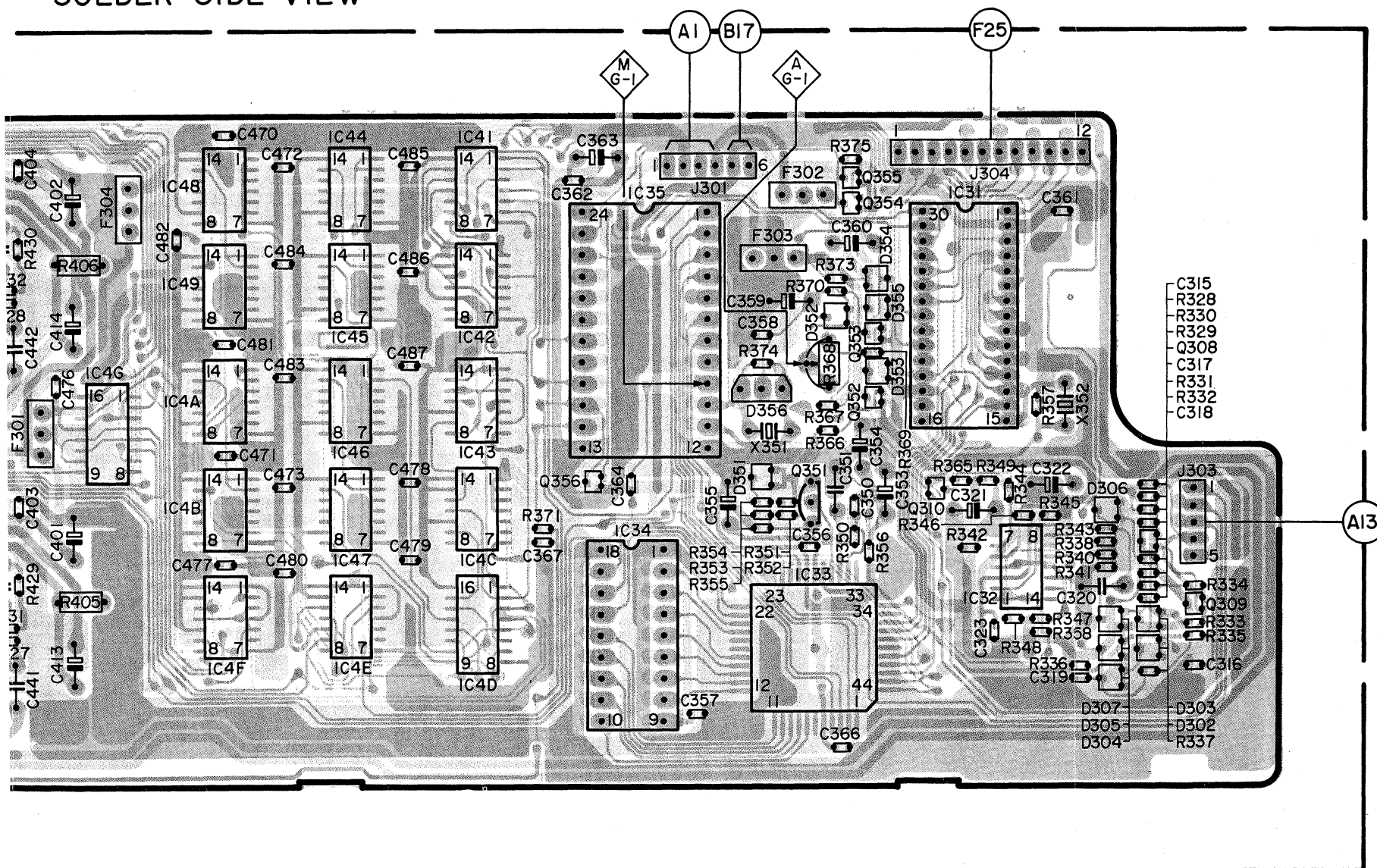
SOLDER SIDE VIEW

R	R444 R376										R408 R406										R374 R370 R373 R375 R369										R344 R357 R345										F					
	R442		R433~R440		R403 R401		R409~R414 R377 R404 R402 R421~R426 R427~R432										R371										R367 R366										R365 R349 R343 R338 R340 R341									
	R441		R443 R415~R420										R407		R405		R351~R355										R350 R356 R346 R342 R348 R336										R337 R									
C	C405~C410				C412 C380				C416				C401~C404 C482 C470~C473				C485~C487				C362 C363				C359 C358				C360				C361				C315									
	C490 C449~C452		C488 C445~C448		C418~C423		C411 C381		C433~C436		C415		C414		C481 C484 C483		C478		C364				C355		C351 C354 C353 C321				C322																	
	C491		C453~C458 C489				C413		C424~C432				C437~C444				C413		C477 C480		C479		C367				C357		C356 C366 C350				C323 C319 C320													
Q-IC	IC4L				IC4J				IC4G				IC48 IC49				IC44~IC47				IC41~IC43				IC35				Q351 Q352~Q355 IC31																	
	IC4K				IC4H				IC4A IC4B IC4F				IC4E				IC4C IC4D Q356				IC34				IC33				Q310 IC32				Q													
D																					D351 D356 D352~D355										D302~D30															
F-L-X	L401~L404										L406 L405 F301 F304										F303 X351 F302										X352															



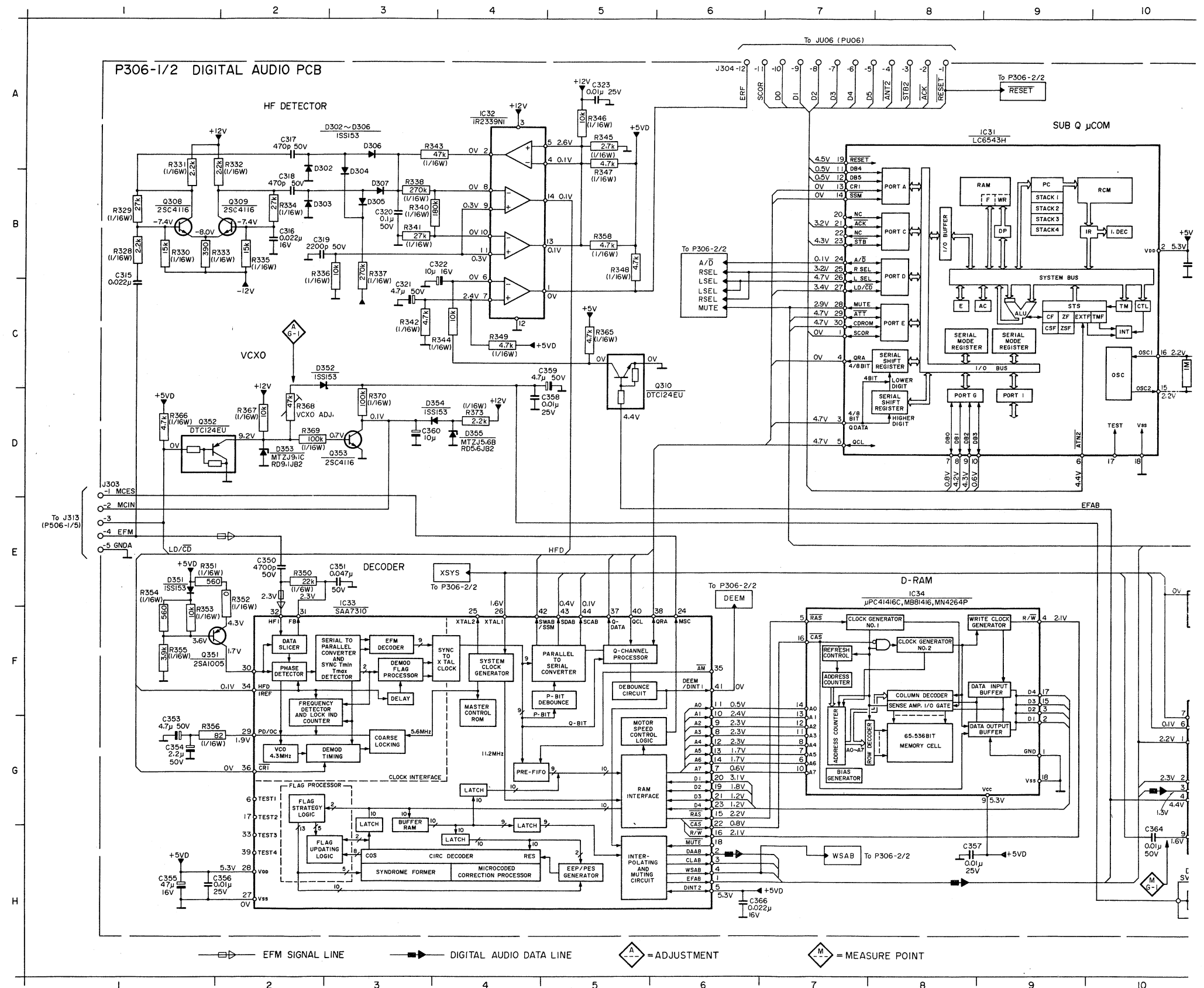
08	R406	R374 R370 R373 R375 R369										R344 R357 R345			R328~R332			R	
421~R426 R427~R432		R371				R367 R366				R365 R349 R343 R338 R340 R341 R347 R358									
07	R405	R351~R355				R350R356 R346 R342 R348 R336				R337 R333~R335									
16	C401~C404 C482 C470~C473	C485~C487			C362 C363		C359 C358		C360		C361			C315 C317 C318			C		
15	C414	C481 C484 C483			C478		C364		C355		C351 C354 C353 C321 C322								
144	C413	C477 C480		C479		C367		C357		C356 C366 C350		C323 C319 C320			C316				
IC4G		IC48 IC49		IC44~IC47		IC41~IC43		IC35		Q351 Q352~Q355 IC31								Q-IC	
IC4A IC4B IC4F		IC4E		IC4C IC4D		Q356		IC34		IC33		Q310 IC32		Q308 Q309					
D351 D356 D352~D355										D302~D307									
405 F301 F304		F303 X351 F302								X352						F-L-X			

SOLDER SIDE VIEW

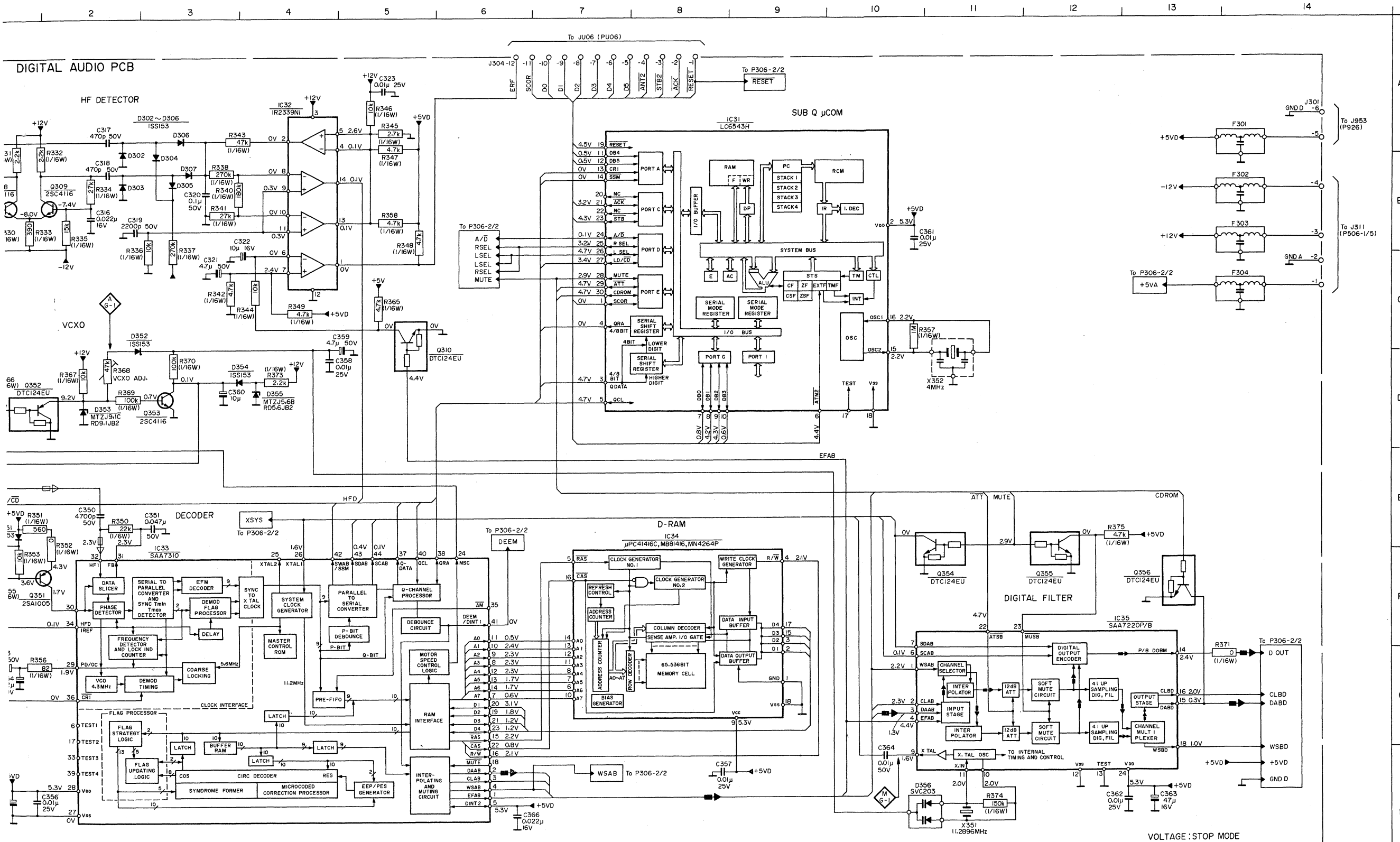


H. P306 DIGITAL AUDIO SCHEMATIC DIAGRAMS

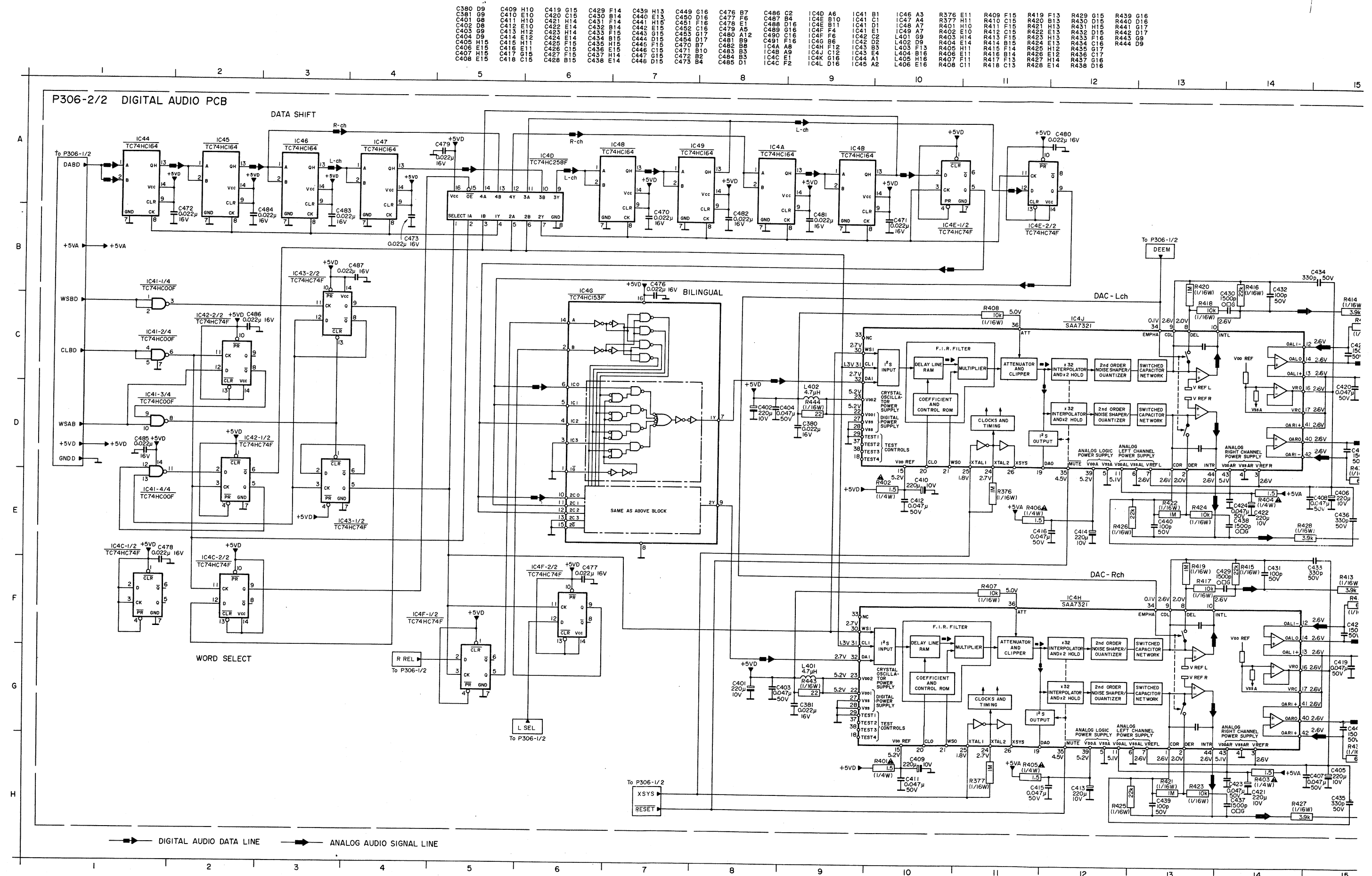
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C316 B2	C352 G1	C363 H13	D352 E2	IC32 A4	Q354 F11	R335 B2	R346 A5	R356 G1	R372 D4
C317 A2	C353 G1	C364 H10	D353 D2	IC33 E3	Q355 F12	R336 B2	R347 B5	R357 C10	R373 H11
C318 B2	C354 H1	C365 H6	D354 D3	IC34 E8	Q356 F13	R337 B3	R348 B5	R358 B5	R374 E12
C319 B2	C355 H2	D302 A2	D355 D4	IC35 F13	R328 B1	R338 B3	R349 C4	R359 C5	R375 E12
C320 B3	C356 H2	D303 B2	D356 H10	Q308 B1	R329 B1	R340 B3	R350 E2	R360 D1	R376 E11
C321 C3	C357 H8	D304 B3	F301 A14	Q309 B1	R330 B1	R341 B3	R351 E1	R361 D1	R377 E11
C322 B4	C358 D5	D305 B3	F302 B14	Q310 C6	R331 A1	R342 C3	R352 E2	R362 D2	R378 E11
C323 A5	C359 C5	D306 A3	F303 B14	Q351 F1	R332 A2	R343 A3	R353 F1	R363 D2	R379 D3
C324 B5	C360 D3	D307 B3	F304 C14	Q352 D1	R333 B1	R344 C4	R354 E1	R364 D2	
C350 E2	C361 B10								

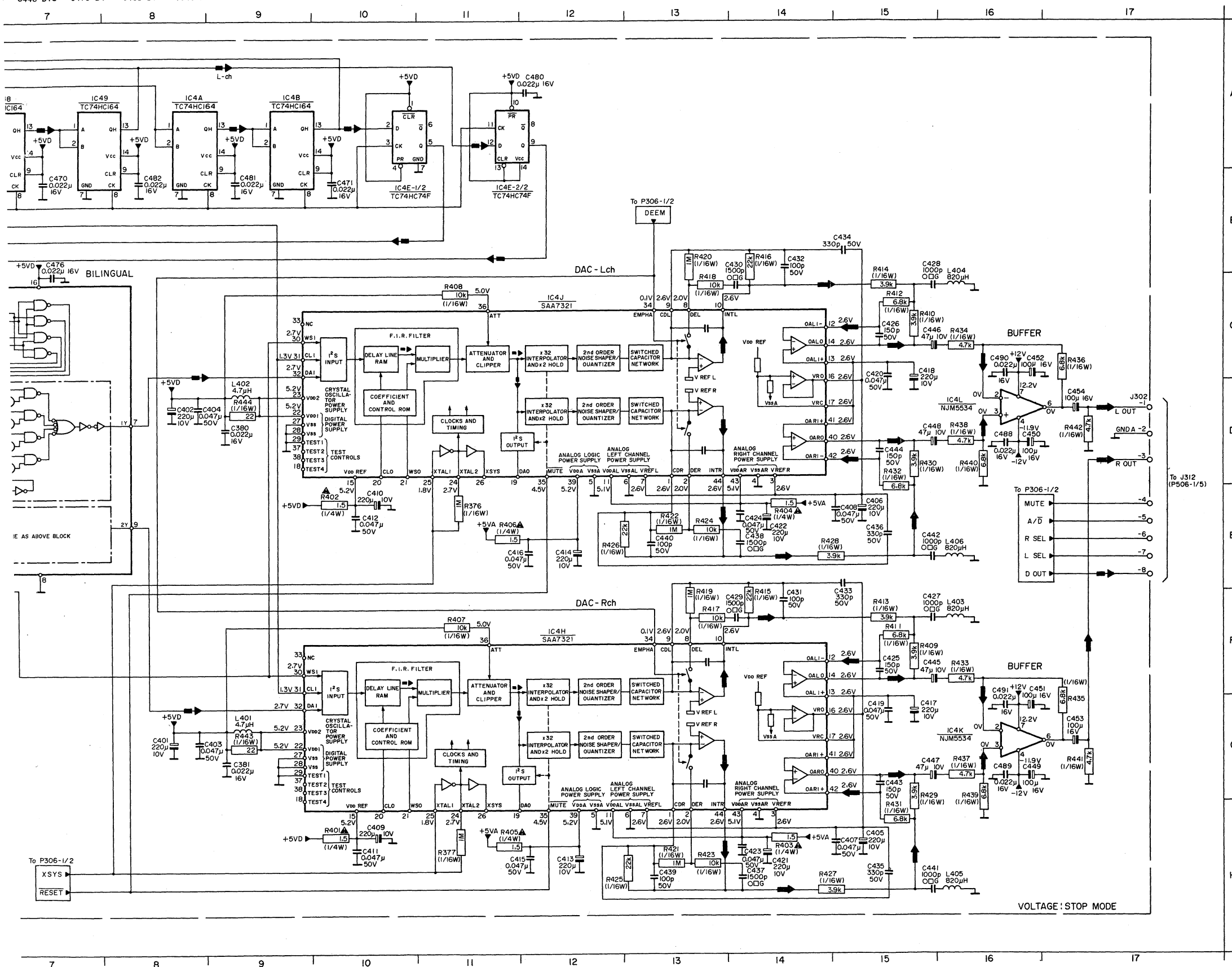


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C316 B2	C352 E4	C363 H13	D352 E2	IC32 A4	Q354 F11	R335 B3	R346 A6	R356 G1	R372 D4
C317 B3	C353 E5	C364 H14	D353 E3	IC33 E3	Q355 F12	R336 B4	R347 B5	R357 C10	R373 H11
C318 B4	C354 E6	C365 H15	D354 E4	IC34 E8	Q356 F13	R337 B5	R348 B6	R358 B5	R374 H12
C319 B5	C355 E7	C366 H16	D355 E5	IC35 F13	R328 B1	R338 B6	R349 C4	R359 C6	R375 E12
C320 B6	C356 E8	C367 H17	D356 E6	IC36 B1	R329 B2	R339 B7	R350 E2	R360 D1	R376 E13
C321 C3	C357 E9	C368 H18	D357 E7	IC37 B2	R330 B3	R340 B8	R351 E3	R361 D2	R377 D2
C322 B4	C358 E10	C369 H19	D358 E8	IC38 B3	R331 A1	R341 B9	R352 E4	R362 D3	R378 D3
C323 B5	C359 E11	C370 H20	D359 E9	IC39 B4	R332 A2	R342 C3	R353 F1	R363 D4	
C324 B6	C360 E12	C371 H21	D360 E10	IC40 B5	R333 A3	R343 A4	R354 E1	R364 D5	
C325 A5	C361 E13	C372 H22	D361 E11	IC41 B6	R334 A4	R344 C4			

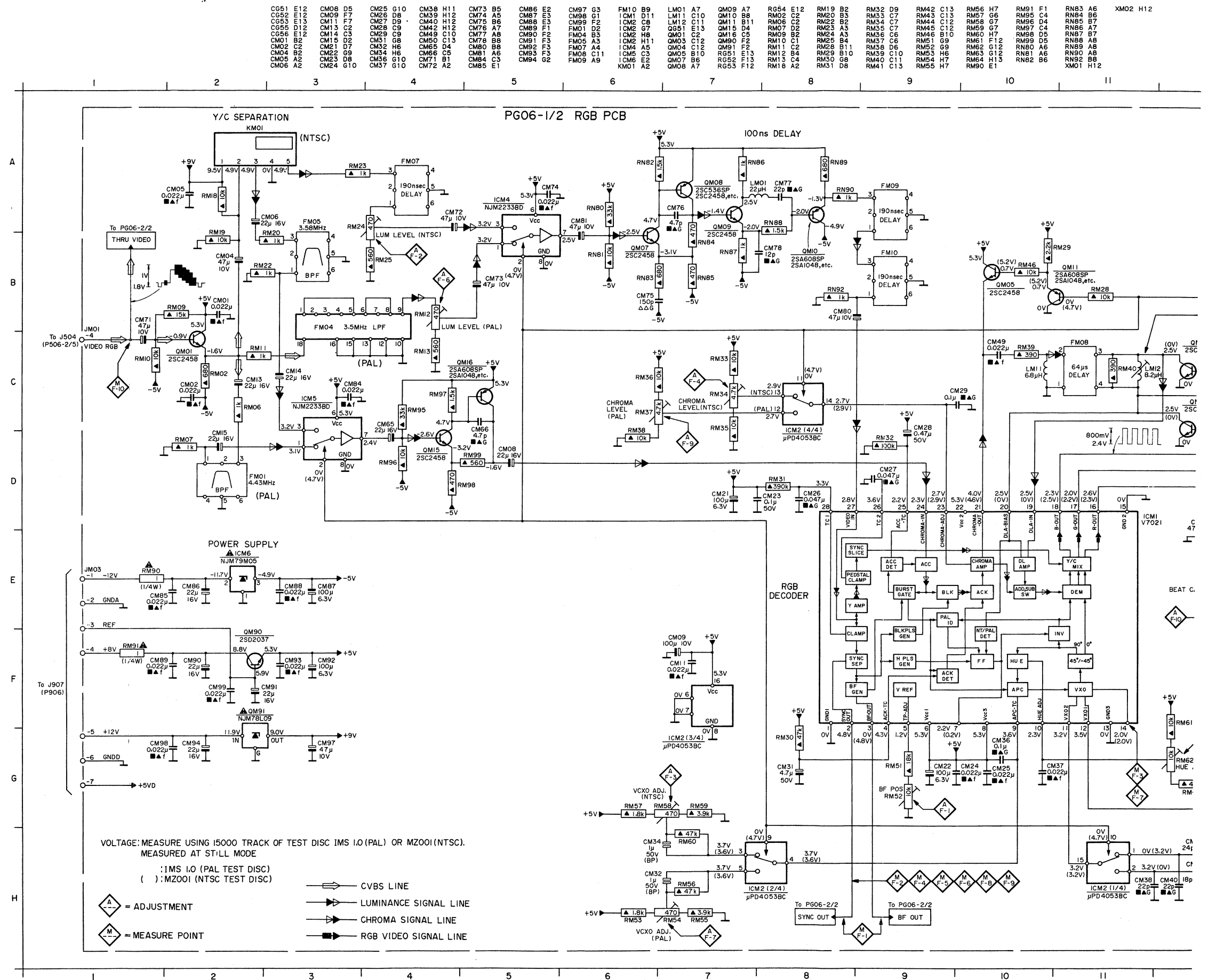


EFM SIGNAL LINE DIGITAL AUDIO DATA LINE = ADJUSTMENT = MEASURE POINT

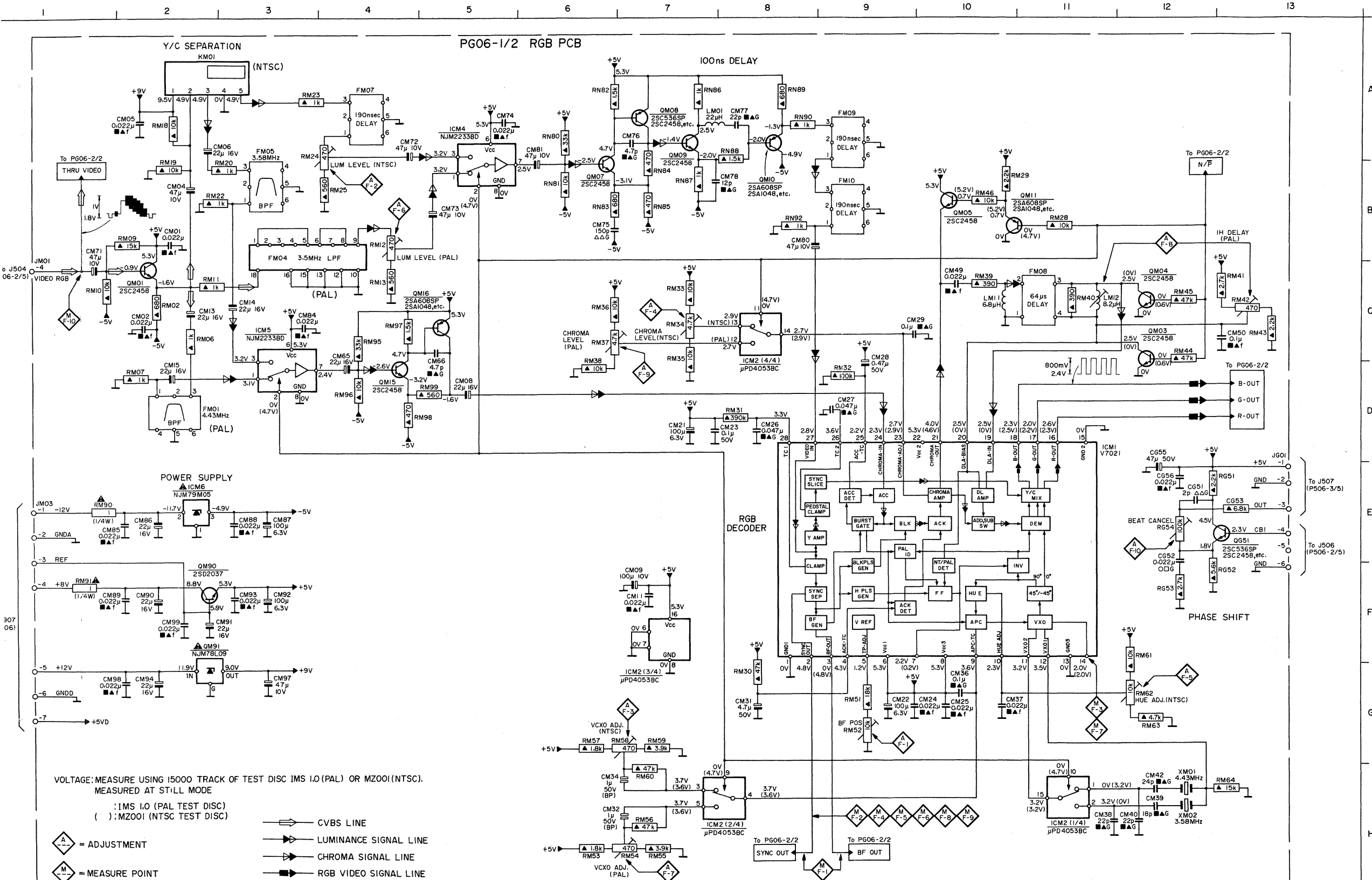


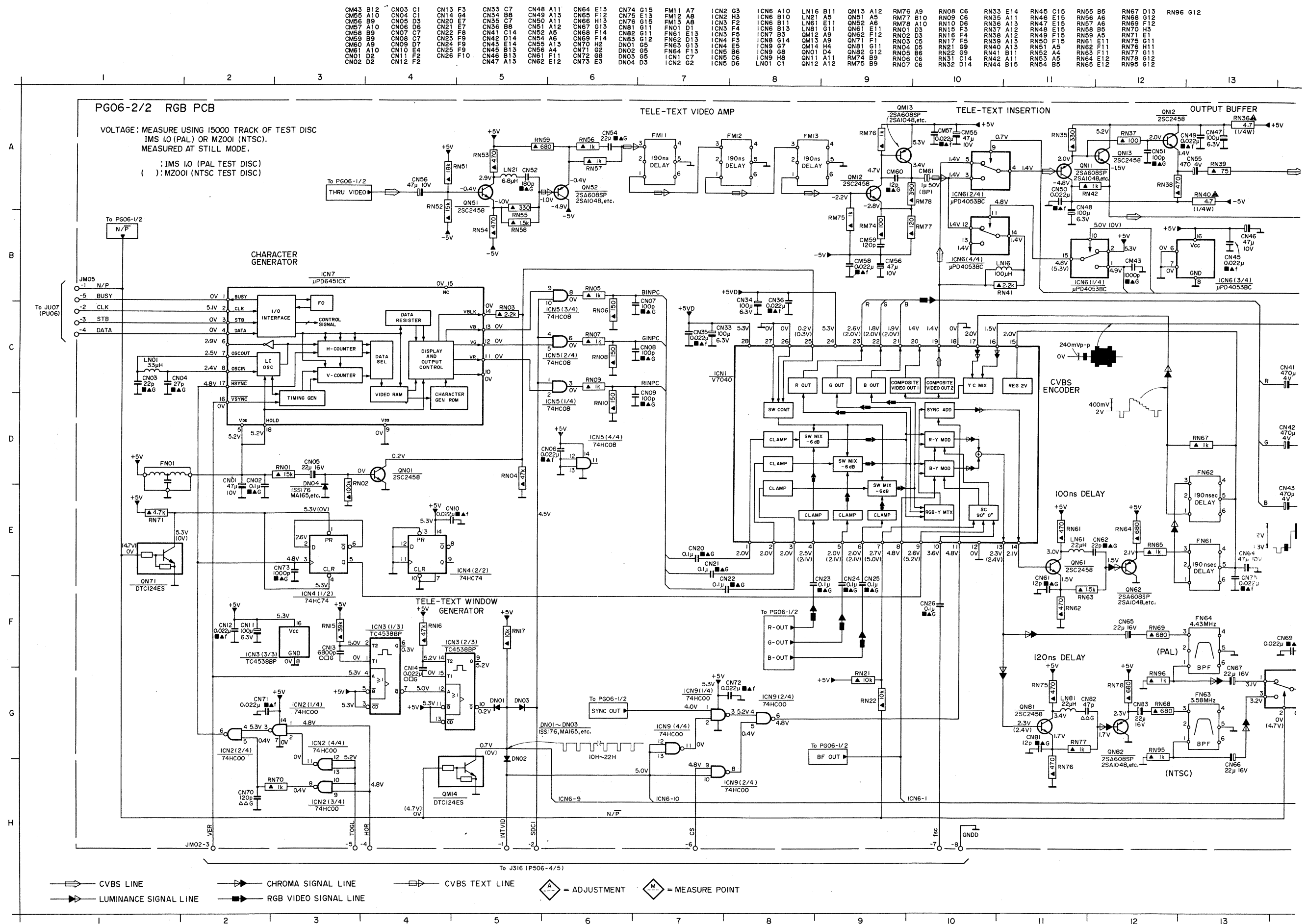


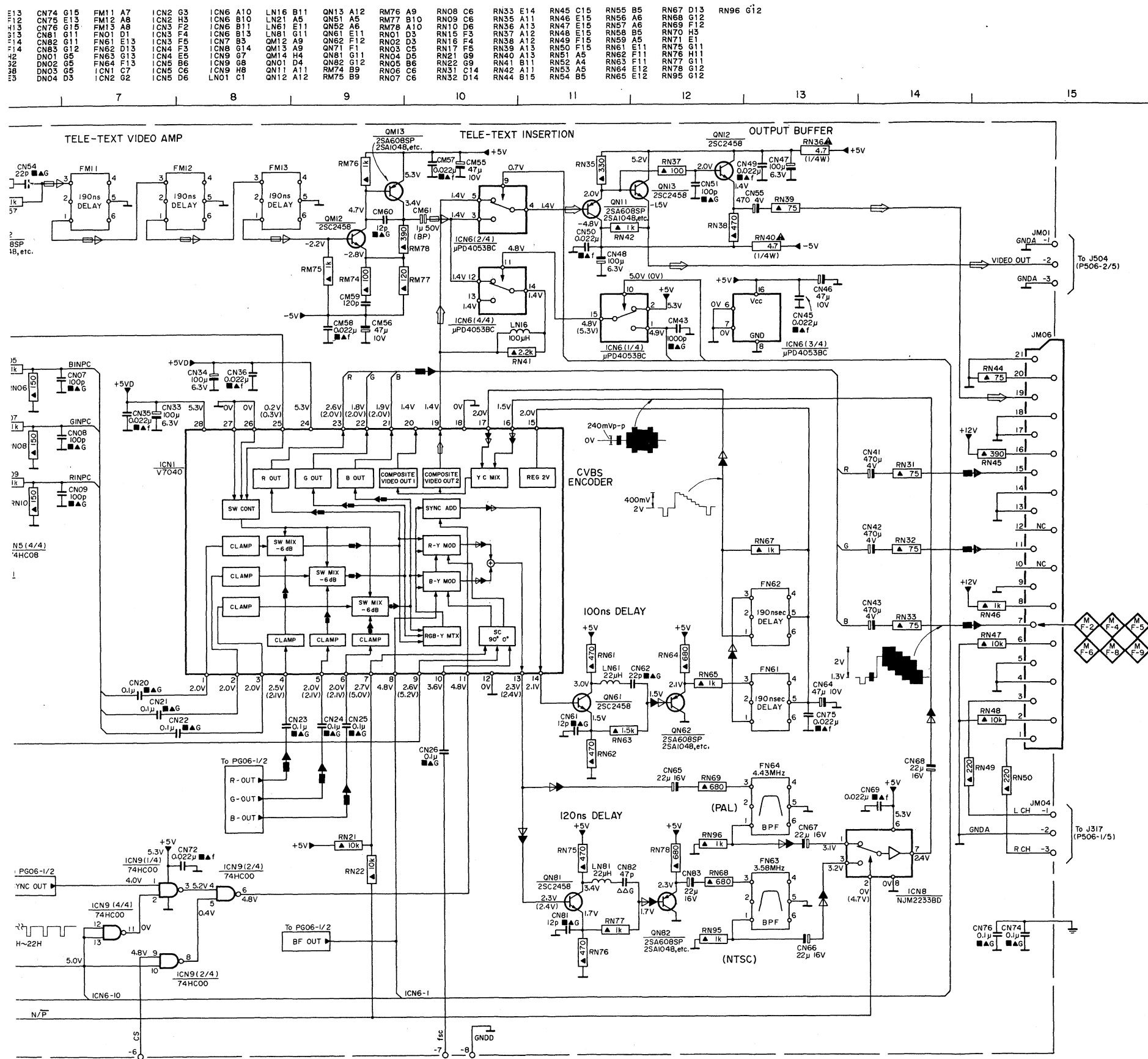
I. PG06 RGB SCHEMATIC DIAGRAMS



CG51 E12	CM08 D5	CM25 G10	CM38 H11	CM73 B5	CM86 E2	CM97 G3	FM10 B9	LM01 A7	QM08 A7	RG54 E12	RM19 B2	RM32 D9	RM42 C13	RM56 H7	RM91 F1	RN83 A6	XM02 H12
CG52 E12	CM09 F7	CM26 D8	CM39 H12	CM74 A5	CM87 E3	CM98 G1	FM11 D11	LM1 C10	QM10 B8	RM02 C2	RM20 B5	RM33 C7	RM43 C13	RM57 G6	RM95 C4	RN84 B6	
CG53 E13	CM11 F7	CM27 D9	CM40 H12	CM75 B6	CM88 E3	CM99 F2	FM12 C11	LM12 C11	QM11 B11	RM06 C2	RM22 B2	RM34 C7	RM44 C12	RM58 G7	RM96 D4	RN85 B7	
CG54 E13	CM13 C2	CM28 C9	CM41 H12	CM76 A7	CM89 F1	CM90 F2	FM13 E13	QM13 E13	QM12 C2	RM07 D2	RM23 A3	RM35 C7	RM45 C12	RM59 G7	RM97 C4	RN86 A7	
CG55 E12	CM14 C3	CM29 C9	CM42 H12	CM77 A8	CM91 F3	FM04 B3	FM14 H8	QM14 H8	QM15 D4	RM08 B2	RM24 A3	RM36 C6	RM46 B10	RM60 H7	RM98 D5	RN87 B7	
CM01 B2	CM15 D2	CM31 G8	CM43 H10	CM78 B8	CM92 F3	FM05 A3	CM2 C2	CM10 C1	QM16 C5	RM09 B2	RM25 B4	RM37 C6	RM47 B10	RM61 F12	RM99 D5	RN88 A8	
CM02 C2	CM21 D7	CM32 H6	CM44 H6	CM79 B8	CM93 F3	FM06 A4	CM3 C3	CM11 C2	QM17 F2	RM10 C1	RM26 B4	RM38 D6	RM48 B10	RM62 G12	RM00 A6	RN89 A8	
CM04 B2	CM22 G9	CM33 H6	CM45 H6	CM80 B8	CM94 G2	FM07 A4	CM5 C3	CM12 C2	QM18 B10	RM11 C2	RM27 B11	RM39 C10	RM49 B10	RM63 G12	RM01 A6	RN90 A6	
CM05 A2	CM23 D8	CM34 H6	CM46 H6	CM81 A6		FM08 C11	CM6 C3	CM13 C2	QM19 E13	RM12 B4	RM28 B10	RM40 C11	RM50 H7	RM64 H13	RM02 B6	RN91 B6	
CM06 A2	CM24 G10	CM35 G10	CM47 A2	CM82 E1		FM09 A9	CM7 B1	CM14 C2	QM20 A7	RM13 C4	RM29 D8	RM41 C13	RM51 H7	RM65 H7			



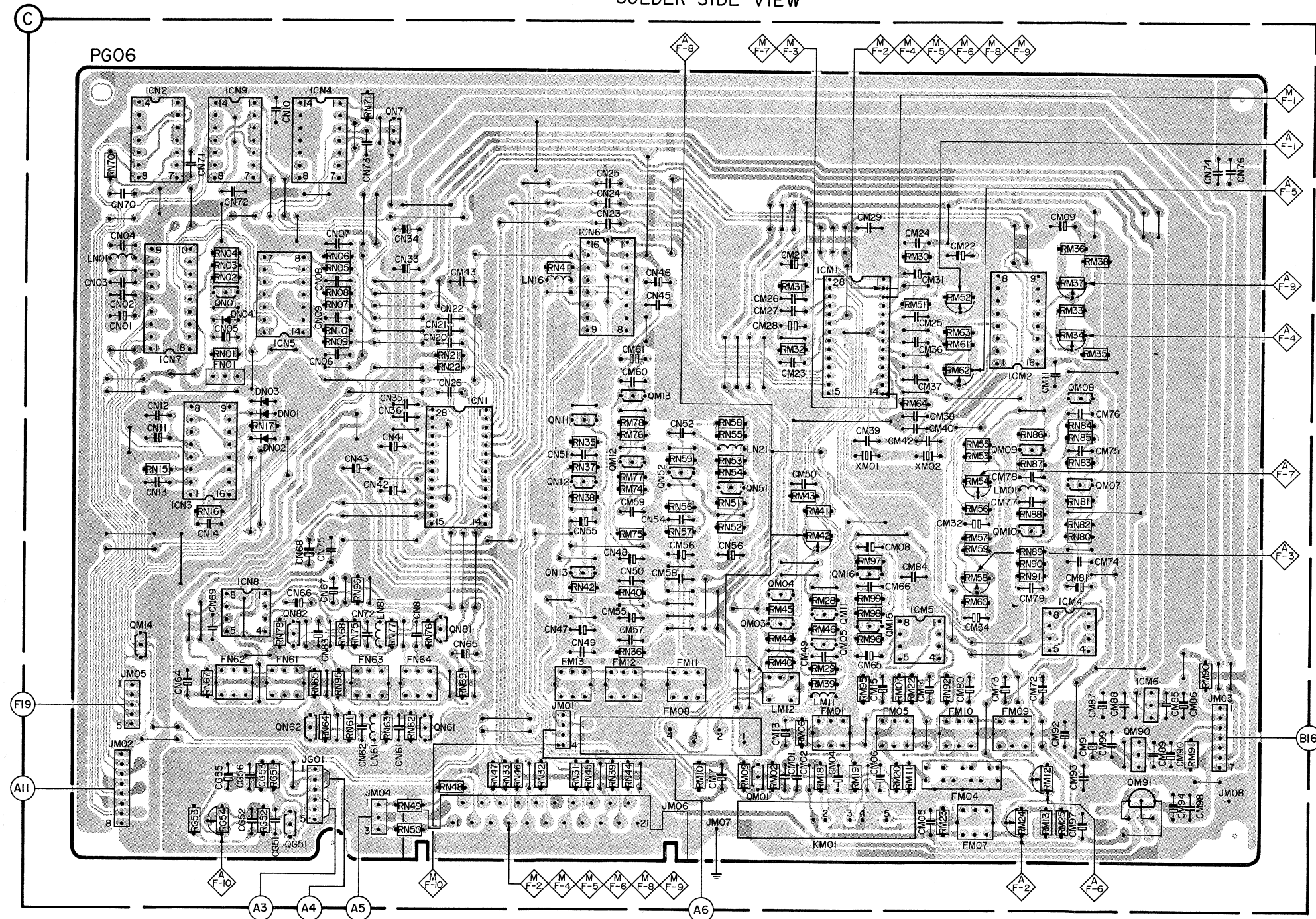




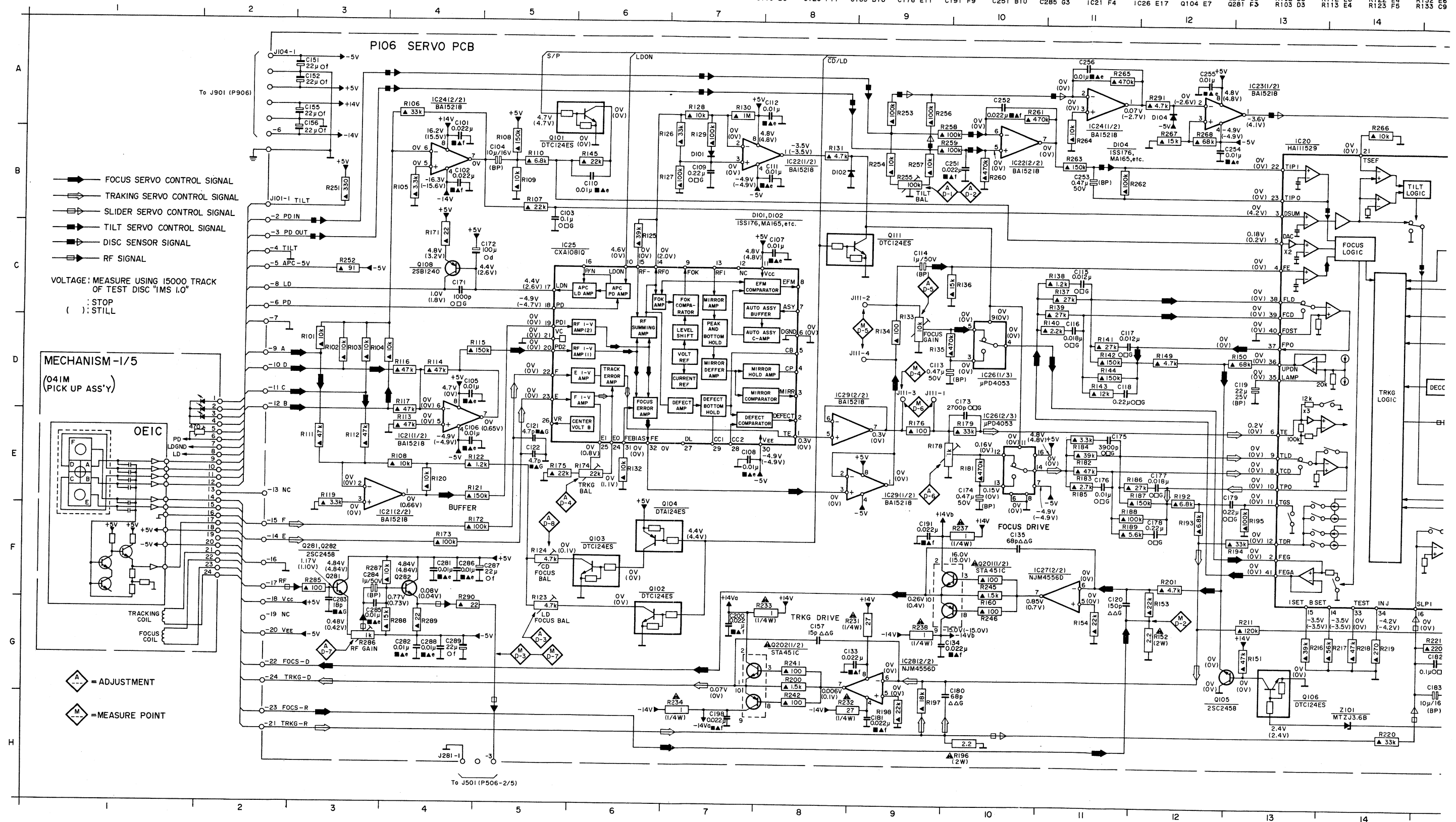
J. PG06 RGB PCB

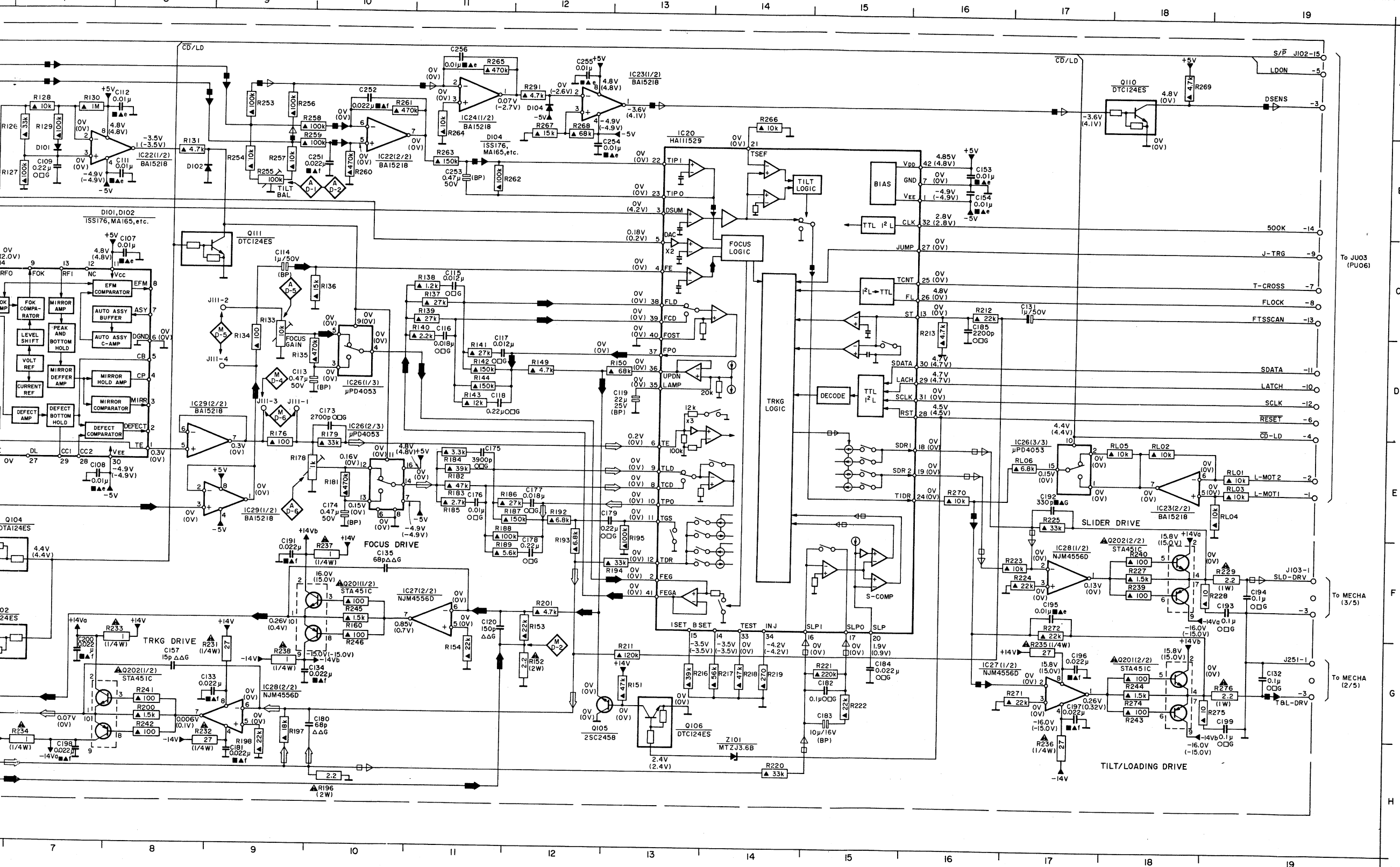
R	RN70	RN01~RN04	RN05~RN10	RN71	RN21 RN22	RN41	RM31 RM32	RM30 RM51 RM52	RM33~RM38	R
	RN15~RN17	RN96	RN35 RN37 RN38	RM74~RM78	RN51~RN59	RM41~RM43	RM61~RM64	RM53~RM60	RN86~RN91	
C	RN67	RN78	RN68 RN75~RN77	RN69	RN42	RN40 RN36	RM40 RM44~RM46	RM28 RM29 RM39	RM95~RM99	C
	RG51~RG54	RN61~RN65	RN95	RN48~RN50	RN44~RN47	RN31~RN33	RN39	RM10	RM09 RM02 RM06 RM18~RM20	
	CN70~CN72	CN10	CN73 CN34 CN33	CM43	CN23~CN25	CN46 CN45	CM26~CM28	CM21 CM23	CM29	
	CN01~CN04	CN11~CN14	CN05	CN06~CN09	CN35 CN36	CN20~CN22	CN26	CN51 CN55	CM59~CM61	
Q-IC	ICN2	ICN7	QNO1	ICN9	ICN5	ICN4	QN71	ICN6	ICM1	Q-IC
	ICN3	QN82	QN81	ICN1	QN11~QN13	QM12	QM13	QN52	QN51	
	QM14	ICN8	QN62	Q651	QN61	QM01	QM03~QM05	QM11	QM15	
D-Z	DN04 DN01~DN03									D-Z
F	FN01 FN61~FN64									F
K-L-X	LN01	LN61	LN81	LN16	FM11~FM13	FM08	FM01	FM05	FM10 FM04 FM07 FM09	K-L-X

SOLDER SIDE VIEW



K. PI06 SERVO/MECHANISM PICK-UP ASS'Y SCHEMATIC DIAGRAM

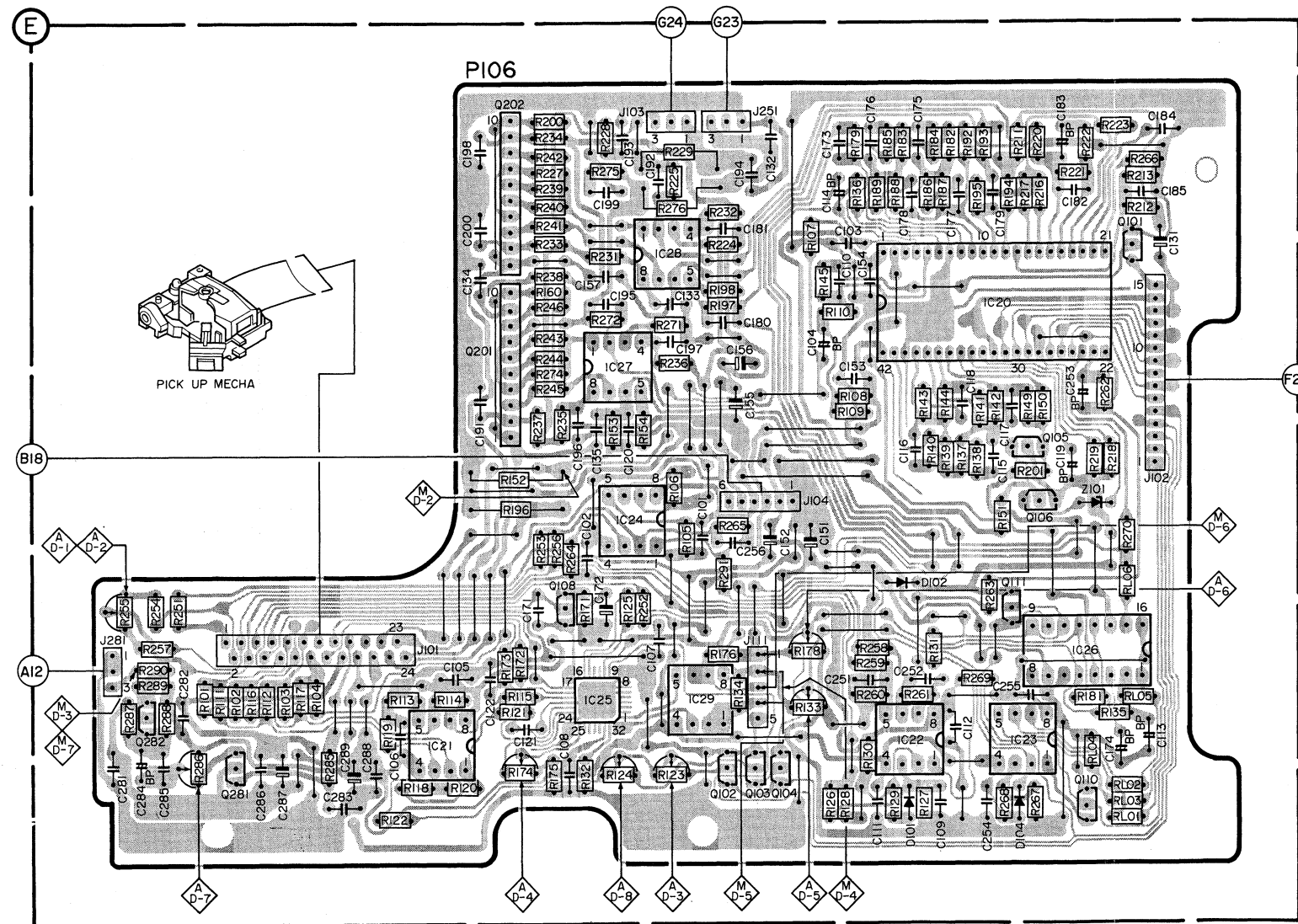




L. PI06 SERVO PCB

R	R200 R233~R235 R275 R228 R229 R225 R276 R232 R224 R179 R182~R189 R192~R195 R211 R220~R223 R266 R213																				R
	R227 R237~R246 R231 R272 R271 R236 R198 R197 R107~R110 R145 R136~R144 R217 R216 R219 R262 R218 R212																				
	R255 R257 R254 R251 R101~R104 R285										R113~R115 R152~R154 R160 R274 R106 R105 R291 R265 R176 R134 R178 R258~R261 R201 R149~R151 R181 R270										
	R287~R290 R286 R111 R116 R112 R117										R118~R122 R196 R171~R175 R253 R256 R264 R132 R123~R125 R252 R133 R126~R130 R263 R267~R269 R135 R101~R106										
C	C198 C134 C157 C199 C192~C197 C181 C180 C132 C173 C110 C103 C175~C179 C182~C185 C131										C										
	C282 C289 C288 C106 C200 C191 C135 C120 C133 C156 C155 C104 C114 C153 C154 C115~C119 C253																				
	C281 C284 C285 C286 C287 C283 C105 C122 C121 C171 C102 C108 C172 C107 C101 C256 C152 C151 C251 C111 C252 C109 C112 C254 C255 C174 C113																				
Q-IC	Q202 IC27 IC28 IC20 Q106 Q105 IC26 Q101										Q-IC										
	Q282 Q281 IC21 Q201 Q108 IC25 IC24 IC29 Q102~Q104 IC22 Q111 IC23 Q110																				
D-Z	D101 D102 D104 Z101										D-Z										

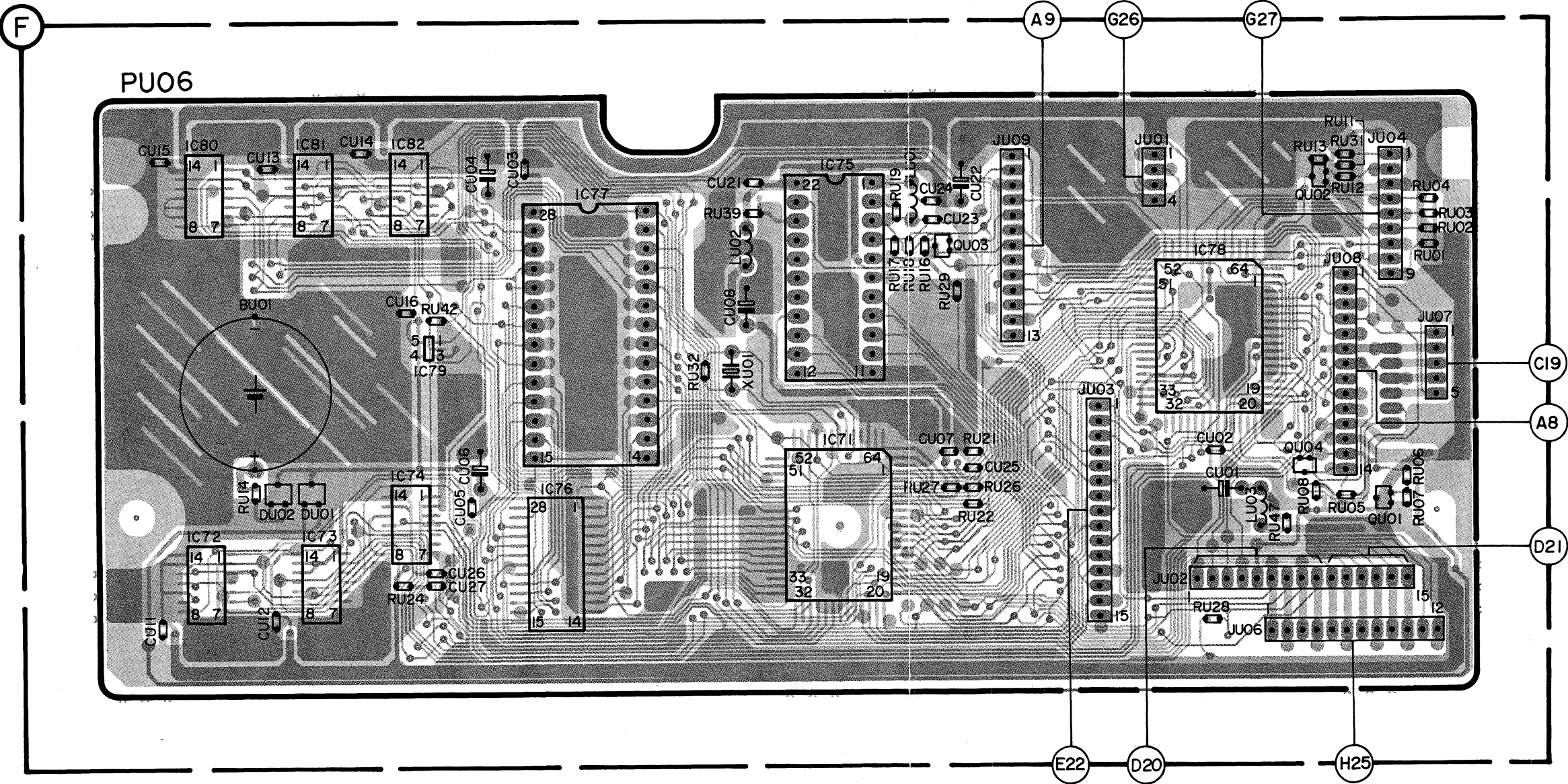
SOLDER SIDE VIEW



M. PU06 SYSTEM CONTROL PCB

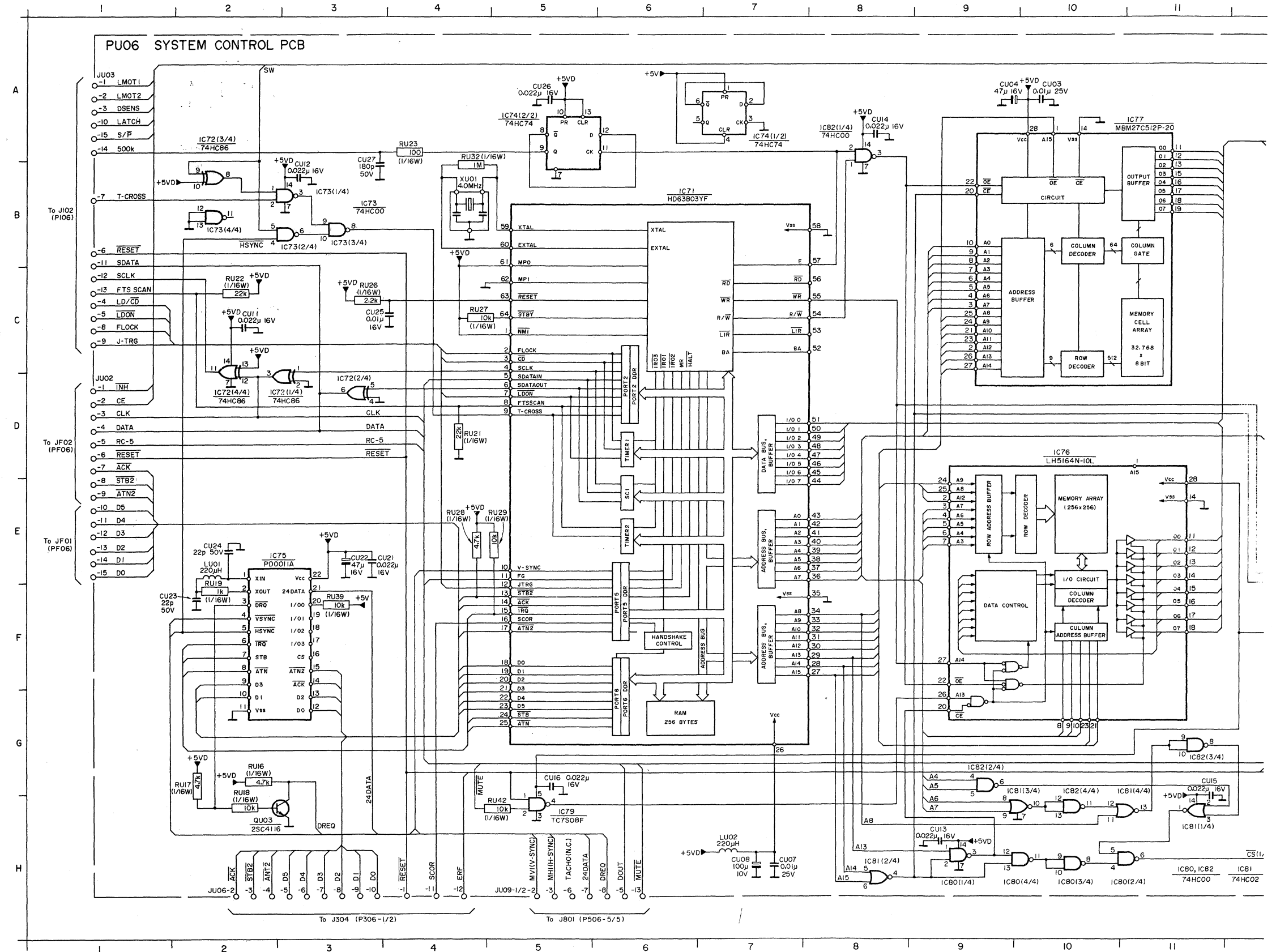
R	RUI4				RU24 RU42		RU39		RUI6~RUI9 RU29				RUI1~RUI3 RU31 RU01~RU04				R		
	CUI5		CUI3		CUI4		CUI6		CU04 CU03		CU21 CU08		CU22~CU24		RU28			RU47 RU08 RU05 RU06 RU07	
C	CUI1		CUI2		CU26 CU27 CU06 CU05						CU07				CU25		CU02 CU01		C
	IC80		IC81		IC82		IC77				IC75		QU03		IC78		QU02		
Q-IC	IC72		IC73		IC74 IC79		IC76				IC71		QU04				QU01		Q-IC
	DU02		DU01																
D	BU01		LU02 XU01						LU01				LU03				B-L-X		
B-L-X																			

SOLDER SIDE VIEW

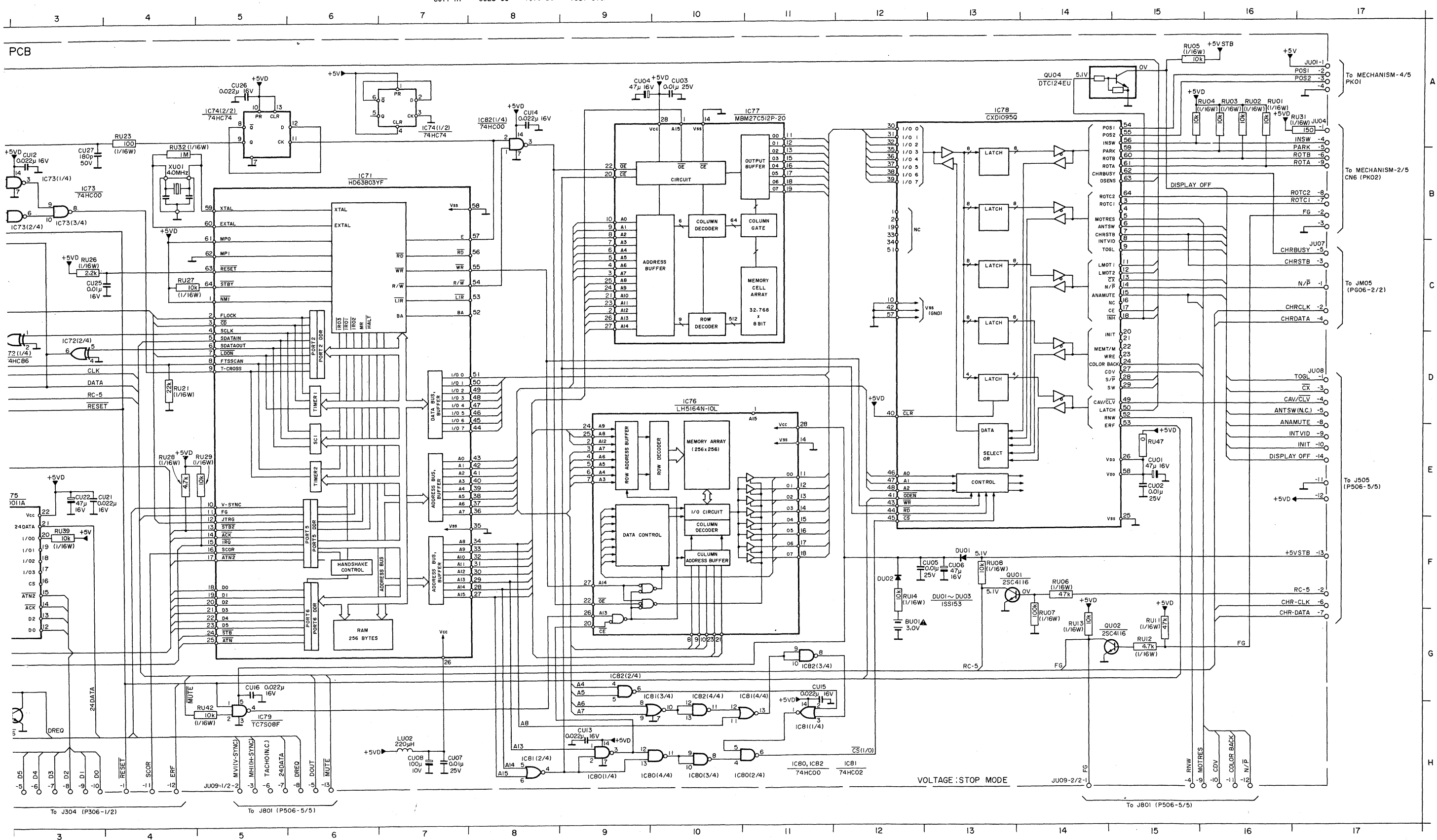


N. PU06 SYSTEM CONTROL SCHEMATIC DIAGRAM

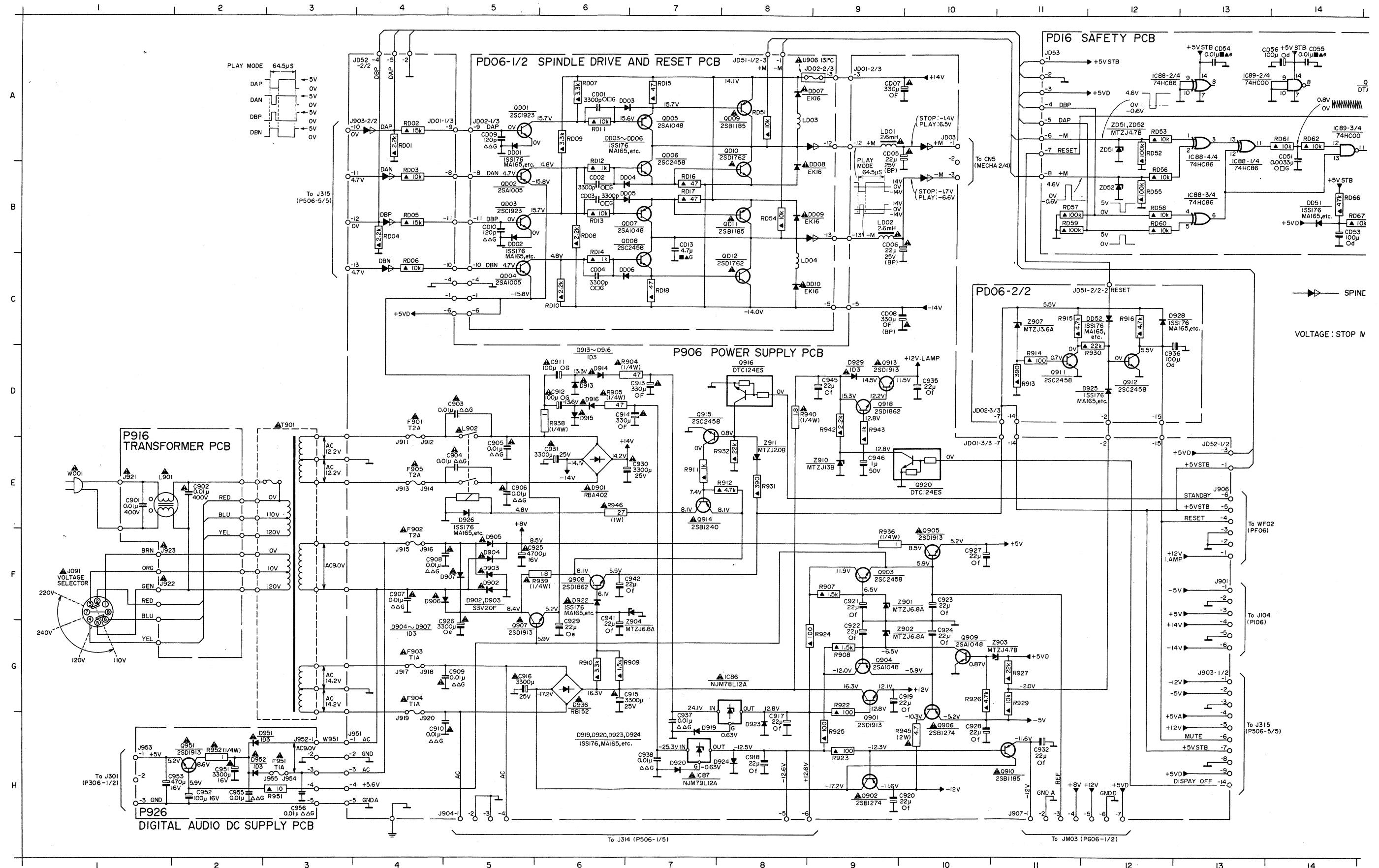
BU01 G12	CU12 B3	CU26 A5	IC74 A5	IC81 G11	QU02 G15	RU08 F13	RU22 C2	RU47 E15
CU01 E15	CU13 H9	CU27 B4	IC74 A7	IC81 H8	QU03 H2	RU11 G15	RU23 A4	RU51 A7
CU02 E15	CU14 A8	DU01 F13	IC75 E2	IC81 H11	QU04 A14	RU12 G15	RU26 C3	RU52 H13
CU03 A10	CU15 G11	DU02 F12	IC76 D10	IC82 A8	RU01 A16	RU13 G14	RU27 C4	XU01 B4
CU04 A9	CU16 G5	IC71 B6	IC77 A11	IC82 B9	RU02 A16	RU14 F12	RU28 E4	
CU05 F13	CU21 E3	IC72 A2	IC78 A13	IC82 G11	RU03 A16	RU16 G2	RU29 E5	
CU06 F13	CU22 E3	IC72 B5	IC79 H5	IC82 H8	RU04 A16	RU17 G2	RU31 A17	
CU07 H7	CU23 F1	IC72 D5	IC80 H9	LU01 E2	RU05 A16	RU18 H2	RU32 A4	
CU08 H7	CU24 E2	IC73 B2	IC80 H11	QU02 F13	RU06 F14	RU19 F2	RU39 F3	
CU11 H7	CU25 C3	IC73 B5	IC81 G10	QU01 F13	RU07 G14	RU21 D4	RU42 H5	

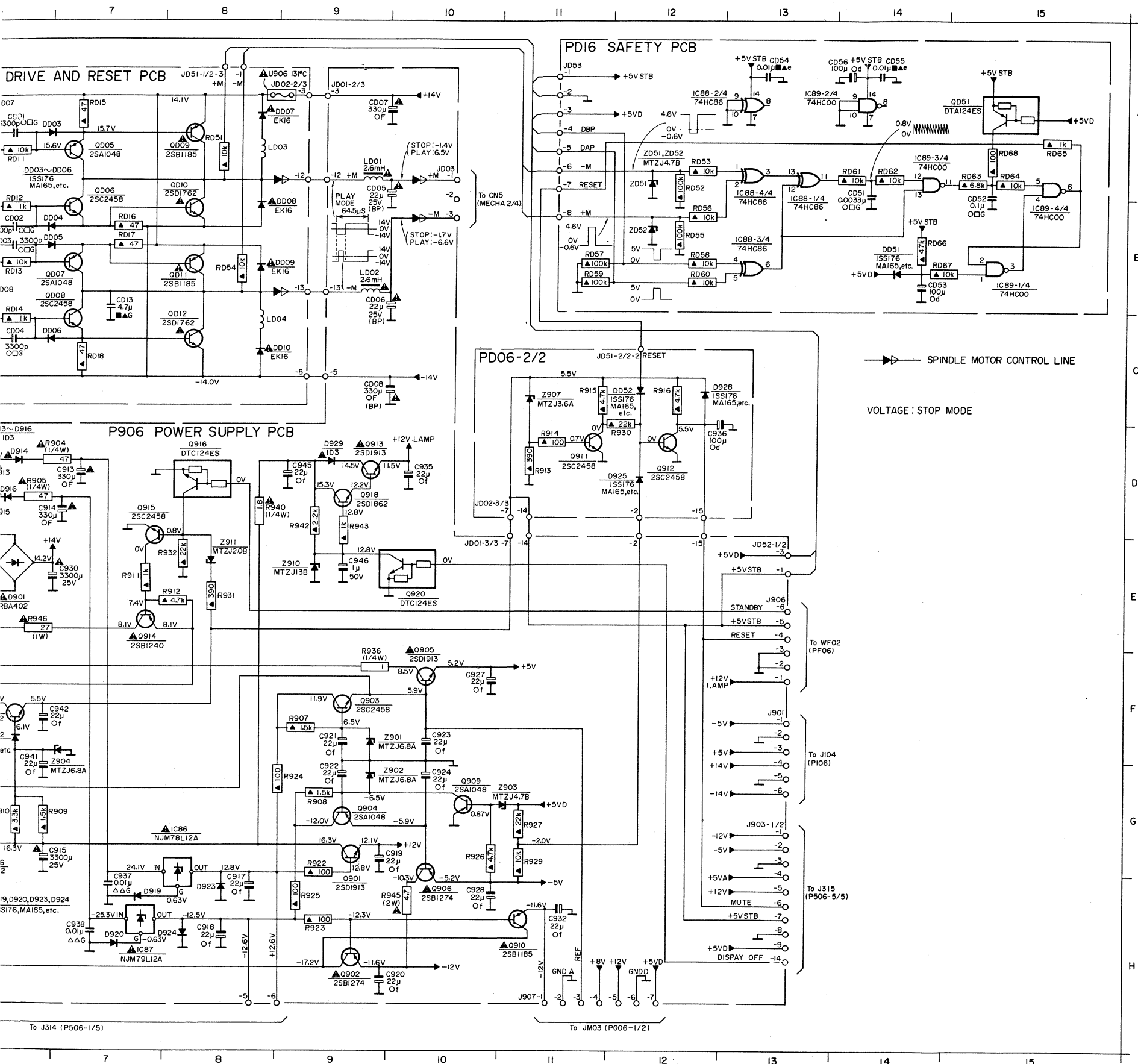


BU01	G12	C12	B3	C2U6	A5	IC74	A5	IC81	G11	QU02	H5	RU08	F13	RU22	G2	RU47	E15
BU01	F15	CU13	A9	C2U6	B4	IC81	A5	IC81	H8	QU02	G12	RU11	G12	RU22	A4	RU51	A7
CU02	A15	CU14	A8	DU01	F13	C75	E2	IC81	H1	QU04	A14	RU12	G15	RU26	C3	RU52	H13
CU03	A10	CU15	G11	DU02	F12	C76	D10	IC82	A8	RU01	A16	RU13	G14	RU27	C4	RU53	B4
CU04	A3	CU16	G5	IC77	A1	IC77	A1	IC82	G9	RU03	A16	RU14	G12	RU28	E5	RU54	A1
CU05	A8	CU17	C3	C772	A2	C78	A13	IC82	G11	RU04	A16	RU16	G2	RU29	E5	RU55	A1
CU06	F13	CU22	E3	IC72	B2	C79	H5	IC82	H8	RU05	A16	RU17	G2	RU31	A17	RU56	A1
CU07	H7	CU23	F1	IC72	D3	C80	B9	LU01	E2	RU06	A14	RU18	A4	RU32	A4	RU57	A1
CU08	H7	CU24	E2	IC73	B2	C81	B9	LU02	A1	RU07	A14	RU19	F2	RU33	F3	RU58	A1
CU11	H7	CU25	C3	IC73	B3	C81	G10	RU01	F13	RU08	G14	RU21	D4	RU34	H5	RU59	A1



O. P906 POWER SUPPLY/P916 TRANSFORMER/P926 DIGITAL AUDIO DC SUPPLY
/PD06 SPINDLE DRIVE & RESET/PD16 SAFETY SCHEMATIC DIAGRAMS

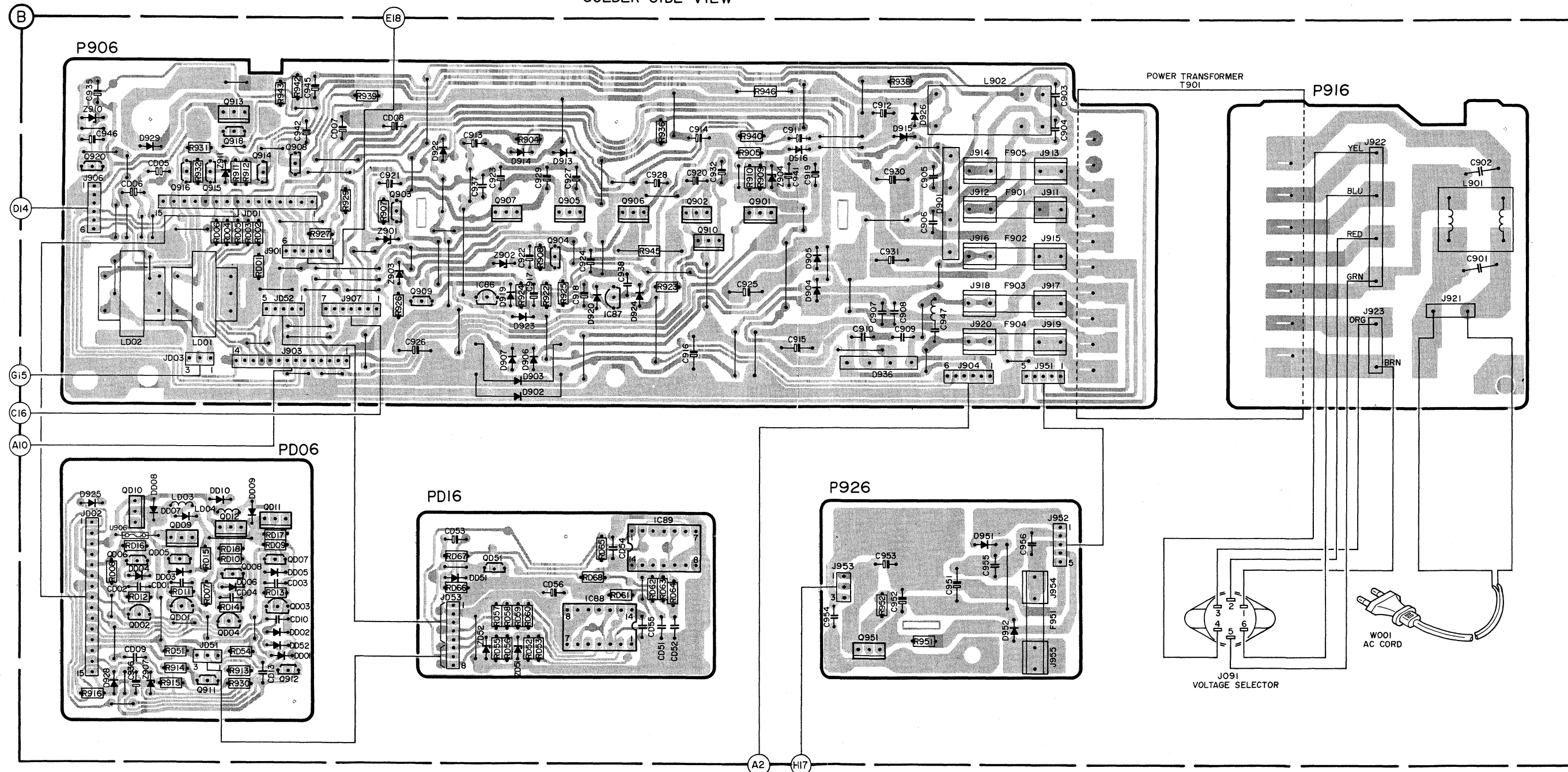




P. P906 POWER SUPPLY/P916 TRANSFORMER/P926 DIGITAL AUDIO DC SUPPLY
/PD06 SINGLE DRIVE & RESET/PD16 SAFETY PCBs

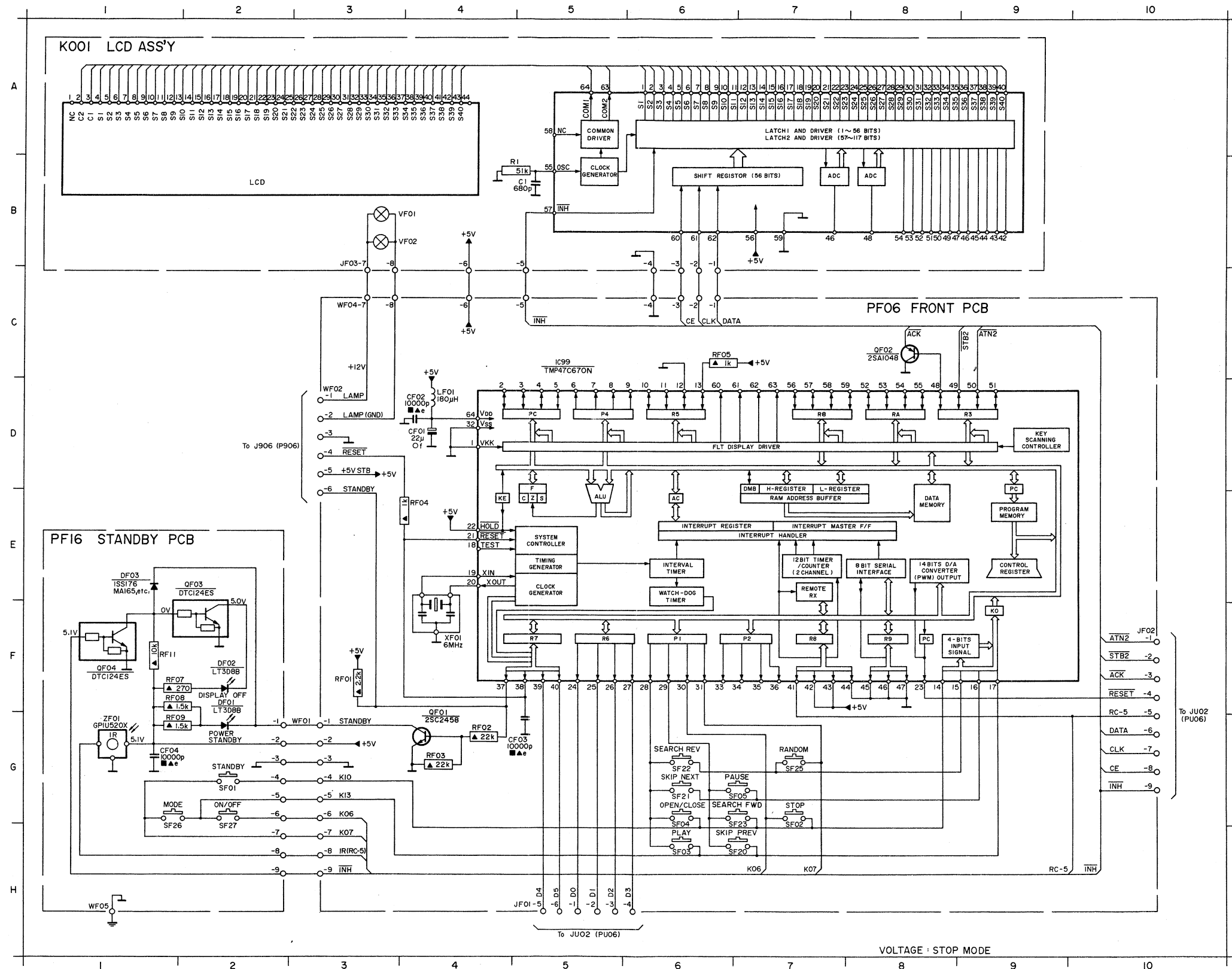
R	R931	R911 R943 R942	R939	R904	R936	R940 R946	R938	R
	R932 RD01~RD06 R912	R927 R929 R907	R908	R945	R905			
C	RD08 RD16	RD11 RD15 RD07 RD18 RD10 RD17 RD09	R926	R924 R922 R925	R923	R910 R909		C
	R916 RD12 RD51 R914 R915 RD14 RD54 R913 R930 RD13		RD67 RD66 RD55~RD60 RD52 RD53 RD68 RD61~RD65		R952 R951			
Q-IC	C935	C942 C945 CD07	CD08	C913	C914	C911	C912 C930 C905	Q-IC
	C946 CD06 CD05		C921 C926	C937 C923	C929 C927	C928	C920 C932	
D-Z	CD02	CD01	CD04	CD03		C922 C917 C918 C924 C938	C916 C915	D-Z
	CD09 C936		CD13	CD10			C910 C907 C908 C909 C947	
F-L-T-U	Q920	Q916 Q915 Q913 Q918 Q908	Q903	Q907	Q905	Q906	Q902 Q910 Q901	F-L-T-U
	QD09~QD12 QD05~QD08	Q914	Q909	IC86	Q904	IC87		
F-L-T-U	QD01~QD04	Q911	Q912	QD51	IC88	IC89	Q951	F-L-T-U
	Z910 D929	Z911		Z901 D922	Z902 D914	D913 D920 D924	Z904 D916	
F-L-T-U	D925	DD04 DD08 DD07 DD03 DD10 DD06 DD09 DD05	Z903		D919 D907 D923 D906 D903 D902		D905 D904	F-L-T-U
	D928 Z907	DD02 DD52 DD01	DD51 ZD52 ZD51				D936	
F-L-T-U	U906	LD02	LD03 LD01 LD04				D951 D952	F-L-T-U
							L902 F901~F905 F951	
F-L-T-U							T901	F-L-T-U
							L901	

SOLDER SIDE VIEW



Q. PF06 FRONT/PF16 STANDBY SCHEMATIC DIAGRAMS

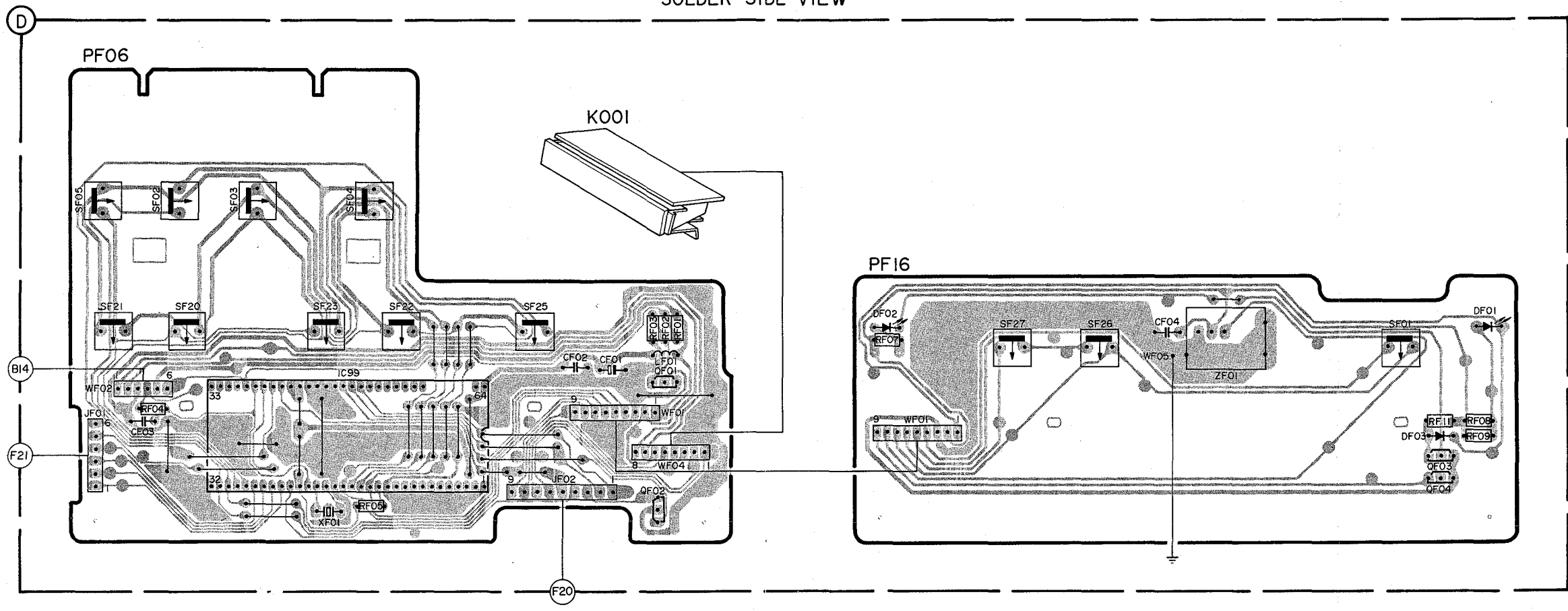
CF01	D4	QF01	G4	RF08	F1	SF22	G6
CF02	D4	QF02	G4	RF09	F1	SF23	G7
CF03	D5	QF03	G5	RF10	F1	SF24	G7
CF04	D6	QF04	G6	RF11	F1	SF25	G7
DF01	F7	RF01	T7	SF01	G2	SF26	H1
DF02	F8	RF02	T8	SF02	G7	SF27	H2
DF03	E1	RF03	G4	SF03	H6	VF01	B3
IC99	C5	RF04	E4	SF04	G6	VF02	B3
K001	A1	RF05	E4	SF05	G7	XF01	F4
LF01	C4	RF06	T7	SF06	H7	ZF01	G1
		RF07	T7	SF21	G6		



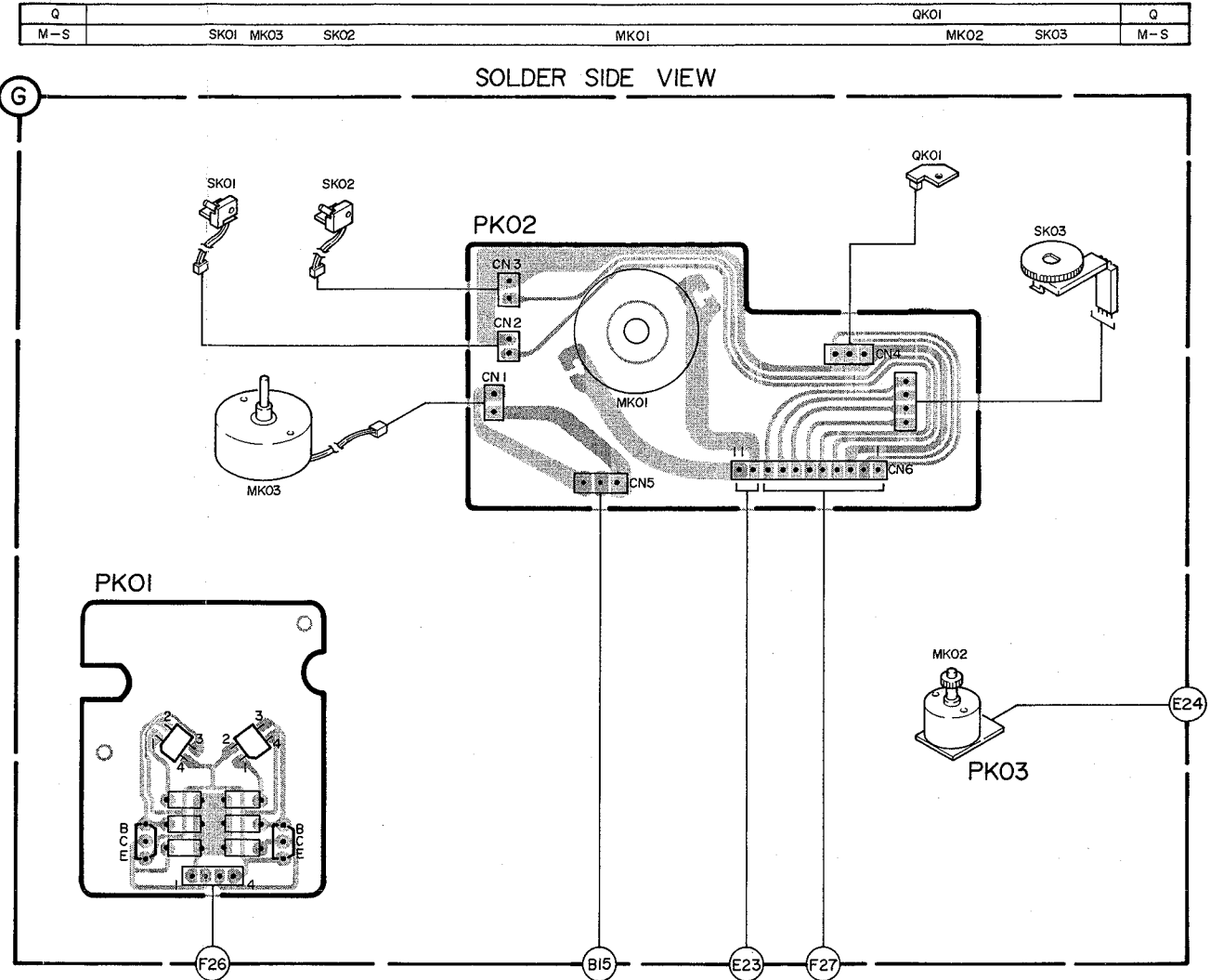
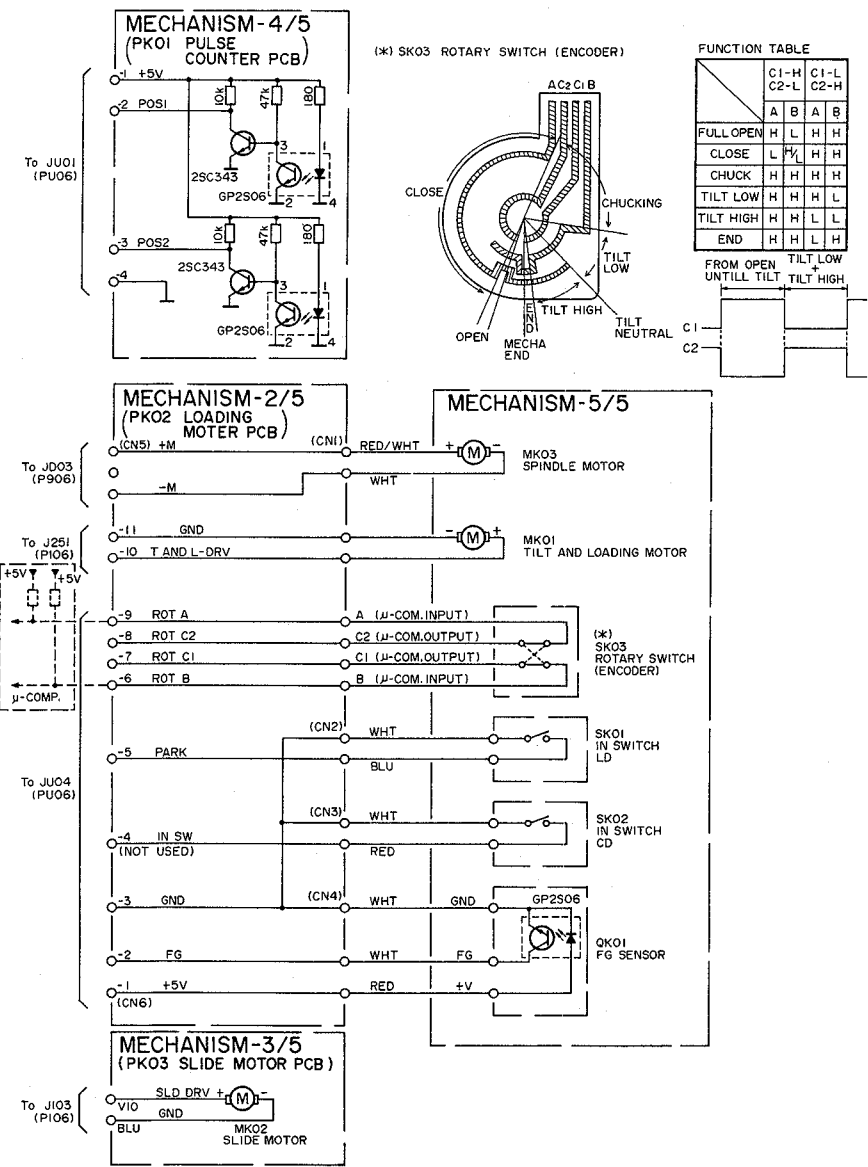
R. PF06 FRONT/PF16 STANDBY PCBs

R	RF04	RF05	RF01~RF03			RF07	RF11 RF08 RF09			R
C	CF03		CF02	CF01			CF04			C
Q-IC	IC99		QF02 QF01					QF03 QF04		Q-IC
D					DF02				DF03 DF01	D
S	SF05 SF21	SF02 SF20	SF03	SF23 SF04 SF22	SF25		SF27 SF26		SF01	S
L-X-Z	XF01			LF01			ZF01			L-X-Z

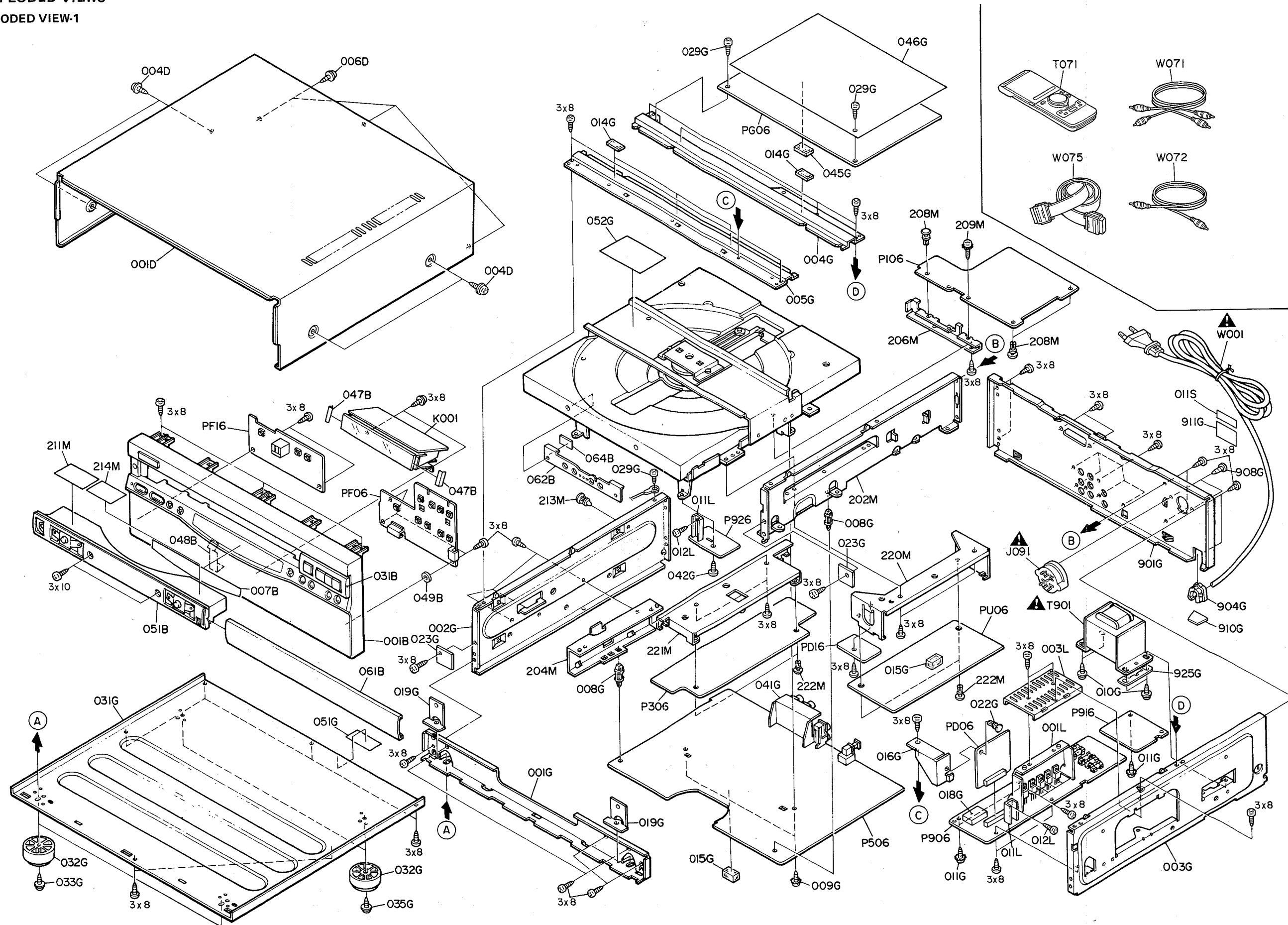
SOLDER SIDE VIEW



S. MECHANISM SCHEMATIC DIAGRAMS & PCBs



XI. EXPLODED VIEWS A. EXPLODED VIEW-1



XII PARTSLIST

PARTSLIST LDP600WS CONTENTS:

EXPLODE VIEW	MECHANISM
EXPLODED VIEW	CABINET
MAIN PCB	P506
DIGITAL AUDIO PCB	P306
RGB PCB	PG06
SERVO PCB	P106
SYSTEM CONTROL PCB	PU06
POWERSUPPLY PCB	P906
SAFETY PCB	PD16
SPINDEL DRIVER PCB	PD06
DIG.AUDIO PCB	P926
TRANSFORMER PCB	P916
FRONT PCB	PU06
STANDBY PCB	PF16
SERVICE TOOLS	

PARTSLIST EXPLODED VIEW-1 CABINET

PARTSLIST EXPLODE VIEW-2 MECHANISM

T071	4822 218 10412	RC600LDP REMOTE CONT	001M	4822 691 30261	LOADING ASSY COMPLETE
			MK01	4822 361 30327	L MOTOR ASS'Y
			MK02	4822 361 30328	SLED MOTOR ASS'Y
			MK03	4822 361 30329	DC MOTOR.
031B	4822 454 30453	OPEN/CLOSE ESCUTCHEON	PK01	4822 214 51843	PULSE CNTR PCB ASSY
J091	4822 272 10227	4 VOLTAGE SW	PK02	4822 214 51844	L MOTOR PCB ASS'Y
K001	4822 130 90999	LCD UNIT BLUE	PK03	4822 214 51845	S MOTOR PCB ASS'Y
T901	4822 146 21633	POWER TRANS EI66-40	QK01	4822 130 82419	FG PCB ASS'Y
W071	4822 321 61265	AUDIO CORD (GOLD)	SK01	4822 271 30743	SW PCB ASS'Y FOR CD
W072	4822 321 61029	VIDEO CORD	SK02	4822 271 30744	SW PCB ASS'Y FOR LD
W075	4822 321 61032	EURO CABLE 1.5M	SK03	4822 273 10221	ROTARY SWITCH
001B	4822 444 40466	FRONT PANEL (ASS'Y)	WK01	4822 320 50211	FLAT CABLE
001D	4822 444 60726	TOP COVER (BLACK)	003M	4822 462 30517	LOADING GUIDE(A)
002L	4822 502 12128	SCREW FOR TRANSF.	004M	4822 462 30518	LOADING GUIDE(B) 2-
004D	4822 532 11276	SCREW FOR TOP COVER	007M	4822 528 50323	LOADING PULLEY 2-
004L	4822 502 12128	SCREW FOR HEAT-SINK	008M	4822 522 32992	GEAR B 2-
005L	4822 502 12128	SCREW FOR HEAT-SINK	009M	4822 358 31104	LM BELT
006D	4822 502 12355	SCREW FOR TOP COVER	012M	4822 532 12029	WASHER
006G	4822 502 12128	SCREW FOR TOP STAY	016M	4822 532 12028	CLAMPER ASS'Y
007G	4822 502 12128	SCREW FOR MECHA BRAC	019M	4822 532 12027	CLAMPER RETAINER
008G	4822 401 10944	SUPPORT FOR MAIN PCB	020M	4822 492 70831	SPRING
013G	4822 502 12128	SCREW FOR FRONT STAY	026M	4822 425 20204	TRAY ASS'Y (BLACK)
020G	4822 502 12128	SCREW FOR 019G	027M	4822 402 61393	TRAY SUPPORT ASSY
022G	4822 401 11383	PLASTI RIVET FOR M-D	028M	4822 532 12109	COLLAR
024G	4822 502 12128	SCREW FOR 023G	031M	4822 528 10821	TURNTABLE ASS'Y
032G	4822 462 41198	LEG	038M	4822 358 31105	TIMING BELT
034G	4822 502 12128	SCREW FOR BOTTOM LID	041M	4822 691 30237	PU ASS'Y KHS-130A
035G	4822 502 12355	SCREW FOR LEG (REAR)	042M	4822 532 12031	HOLE PIECE
041B	4822 502 12128	SCREW FOR LCD ASS'Y	043M	4822 522 32995	GEAR V
042B	4822 502 12128	SCREW FOR PCB(R)	044M	4822 522 32996	GEAR A2
043B	4822 502 12128	SCREW FOR PCB(L)	045M	4822 522 32997	GEAR A1
045B	4822 502 12128	FRONT PANEL FIX (TOP	046M	4822 528 50324	PULLEY
047B	4822 459 40683	MASK FOR LCD	052M	4822 401 11385	BELT CLAMPER
049B	4822 532 52343	SPACER FOR FRONT PCB	055M	4822 535 93168	SLIDE SHAFT
051B	4822 466 82854	JOINT ASS'Y (BLACK)	056M	4822 401 11386	SHAFT CLAMPER
057B	4822 502 12128	SCREW FOR LEAF SPRIN	063M	4822 404 60686	CHASSIS STOPPER
061B	4822 454 30452	ESCUTCHEON (BLACK)	067M	4822 528 90808	ROLLER
063B	4822 502 12364	SCREW FOR JOINT	069M	4822 404 60684	SLIDE GUIDE
203M	4822 502 12128	SCREW FOR CENTER STA	081M	4822 528 30395	CONTROL CAM
205M	4822 502 12128	SCREW FOR MECHA BRAC	082M	4822 522 32993	LOADING GEAR
208M	4822 401 11383	PLASTI RIVET FOR SER	085M	4822 522 32994	GEAR A
213M	4822 535 71081	SPACER KGLS-8R	086M	4822 528 30396	TILT CAM
222M	4822 401 11383	PLASTI RIVET FOR SYS	087M	4822 530 70123	E RING
223M	4822 502 12128	SCREW FOR TUIKA PCB	091M	4822 535 93169	LOADING SHAFT 2-
901G	4822 444 50654	REAR PANEL (R)	094M	4822 462 71728	CUSHION
902G	4822 502 12128	SCREW FOR STAY (L,C,	095M	4822 522 32998	TRAY GEAR ASS'Y
903G	4822 502 12128	SCREW FOR RCA			
904G	4822 532 61204	BUSH FOR AC CORD			
905G	4822 502 12128	SCREW FOR AV CONNECT			
908G	4822 502 12128	SCREW FOR VOLTAGE SE			

PARTSLIST MAIN PCB P506

-II-

CA01	4822 124 21739	22μF/16V
CA02	4822 126 11559	120pF J CH 50V BLK
CA03	4822 122 10367	150pF J CH 50V BLK
CA04	4822 126 11553	15pF 50V
CA05	4822 126 11557	4.7pF 50V
CA06	4822 122 40528	27pF J CH 50V BLK
CA07	4822 122 40568	68pF J CH 50V BLK
CA08	4822 122 40528	27pF J CH 50V BLK
CA09	4822 122 40588	0.022μF 25V
CA10	4822 122 40588	0.022μF 25V T
CA11	4822 121 42697	0.0082μF,J,M,50V,D=9
CA12	4822 122 40588	0.022μF TP050F223Z T
CA13	4822 124 41246	47μF/ 16V
CA14	4822 122 40588	0.022μF TP050F223Z T
CA15	4822 124 41246	47μF/16V
CA21	4822 122 40588	0.022μF TP050F223Z T
CA22	4822 122 40588	0.022μF TP050F223Z T
CA32	4822 124 22048	220μF/6.3V
CA33	4822 124 22048	220μF/6.3V
CA34	4822 124 22048	220μF/6.3V
CA35	4822 126 11554	18pF 50V
CA36	4822 126 11553	15pF 50V
CA37	4822 122 31173	220pF 50V
CA38	4822 122 31173	220pF 50V
CA39	4822 124 21739	22μF/ 16V
CA40	4822 124 21739	22μF/ 16V
CA41	4822 121 42722	0.001μF,J,M,50V
CA42	4822 121 42722	0.001μF,J,M,50V
CA43	4822 121 42726	0.0047μF,J,M,50V
CA44	4822 121 42726	0.0047μF,J,M,50V
CA45	5322 122 32072	33pF J CH 50V BLK
CA46	5322 122 32072	33pF J CH 50V BLK
CA49	4822 122 31173	220pF 50V
CA50	4822 122 31173	220pF 50V
CA51	4822 124 21739	22μF/16V
CA52	4822 124 21739	22μF/16V
CA53	4822 121 42697	0.0082μF,J,M,50V,D=9
CA54	4822 121 42697	0.0082μF,J,M,50V,D=9
CA55	5322 121 42491	0.047μF,J,N,50V
CA56	5322 121 42491	0.047μF,J,N,50V
CA57	4822 124 22048	220μF/6.3V
CA58	4822 124 22048	220μF/6.3V
CA59	4822 121 42722	0.001μF,J,M,50V
CA60	4822 121 42722	0.001μF,J,M,50V
CA61	4822 124 40792	4.7μF 50V BIPOLAR 7L
CA62	4822 124 40792	4.7μF 50V BIPOLAR 7L
CA63	4822 124 21739	22μF/ 16V
CA64	4822 124 21898	0.47μF/ 50V
CA65	4822 121 42698	0.1μF,J,N,50V
CA66	4822 124 21983	4.7μF/ 50V
CA67	4822 121 42614	0.015μF,J,M,50V
CA69	4822 122 40588	0.022μF TP050F223Z T
CA71	4822 122 33657	56pF J CH 50V
CA72	4822 122 33792	10pF UP050TA100J 50
CA73	4822 122 33657	56pF J CH 50V
CA75	4822 124 21894	10μF 16V 7L
CA78	4822 124 21894	10μF 16V 7L
CA80	4822 122 40588	0.022μF TP050F223Z T
CA81	4822 122 40588	0.022μF TP050F223Z T
CA82	5322 122 32143	22pF J CH 50V
CA83	4822 122 33656	39pF J CH 50V
CG01	4822 124 22048	220μF/6.3V
CG02	4822 126 11558	0.1μF CERAMIC CAP Z
CG03	4822 124 22048	220μF/6.3V
CG04	4822 126 11558	0.1μF CERAMIC CAP Z

-II-

CG05	4822 124 22048	220μF/6.3V
CG06	4822 122 40588	0.022 25V TP050223Z
CG07	4822 124 22048	220μF/6.3V
CG08	4822 122 40588	0.022 μF TP050F23Z
CG10	4822 122 40589	CERMIC CAP. 0.047
CG11	4822 122 40586	0.01μF 16V TP050103Z
CG12	4822 122 40586	10000pF 16V
CG13	4822 122 40568	68pF J CH 50V BLK
CG14	4822 124 41246	47μF/ 16V
CG16	4822 124 22048	220μF/6.3V
CG17	4822 122 40588	0.022μF 25V TP050223
CG18	4822 126 11554	18 pF UP050CH180J 5
CG22	4822 124 41246	47μF/ 16V
CG23	4822 126 11553	15pF 50V
CG24	5322 122 32143	22pF J CH 50V BLK
C301	4822 124 21739	22μF/ 16V
C302	4822 124 21739	22μF/ 16V
C303	4822 126 11559	120pF J CH 50V BLK
C304	4822 121 42327	470PF,J,M,50V
C305	4822 126 11236	82pF J CH 50V BLK
C306	4822 124 41246	47μF/ 16V
C307	4822 122 40588	0.022μF TP050F223Z 2
C308	4822 122 10367	150pF J CH 50V BLK
C310	4822 121 42701	0.018μF,J,M,50V,D=10
C311	4822 124 21983	4.7μF/ 50V
C312	4822 124 41246	47μF/ 16V
C313	4822 122 40589	CERMIC CAP. 0.047
C325	4822 124 41246	47μF/ 16V
C326	4822 124 41246	47μF/ 16V
C327	4822 122 40588	0.022μF TP050F223Z 2
C328	4822 122 40588	0.022μF TP050F223Z T
C330	5322 122 32072	33pF J CH 50V BLK
C365	5322 124 21349	470μF 6.3V 11L
C370	4822 122 40588	0.022μF TP050F223Z 2
C371	4822 122 40588	0.022μF TP050F223Z T
C372	4822 124 21736	1μF/50V
C458	4822 122 40589	0.047μF UP050TA473Z
C459	4822 122 40589	CERMIC CAP. 0.047
C461	4822 122 40589	CERMIC CAP. 0.047
C462	4822 122 40589	CERMIC CAP. 0.047
C463	4822 124 23781	2200μF 25V 16X 25 AR
C464	4822 124 23781	2200μF 25V 16X 25 AR
C465	4822 124 23778	100μF 16V 6.3V 11 AR
C466	4822 124 23778	100μF 16V 6.3X 11 AR
C467	4822 124 23783	470μF 16V 10X12.5 AR
C468	4822 124 23783	470μF 16V 10X12.5 AR
C469	4822 124 23783	470μF 16V 10X12.5 AR
C501	4822 122 40588	0.022μF TP050F223Z 2
C502	4822 124 41246	47μF/ 16V
C503	4822 122 31172	180pF J SL 50V GRN
C504	4822 126 11236	82pF J CH 50V BLK
C505	4822 126 11236	82pF J CH 50V BLK
C506	4822 126 11561	240pF 50V
C507	4822 122 10367	150pF J CH 50V BLK
C508	4822 126 11236	82pF J CH 50V BLK
C509	4822 126 11236	82pF J CH 50V BLK
C510	4822 122 31168	270pF J SL 50V GRN
C511	4822 122 31176	390pF J SL 50V GRN
C512	4822 122 33792	10pF 50V
C513	5322 122 32072	33pF J CH 50V BLK
C514	4822 122 33792	10pF 50V
C515	4822 122 40588	0.022μF TP050F223Z 2
C516	4822 122 40588	0.022μF TP050F223Z 2
C517	4822 122 40588	0.022μF TP050F223Z 2
C518	4822 122 40588	0.022μF TP050F223Z T

PARTSLIST MAIN PCB P506 (continued)

-II-			-II-		
C519	4822 122 40588	0.022μF TP050F223Z T	C589	4822 122 40588	0.022μF TP050F223Z T
C520	4822 122 33792	10pF 50V	C590	4822 124 21983	4.7μF/50V
C521	4822 122 40588	0.022μF TP050F223Z T	C591	4822 122 40588	0.022μF TP050F223Z T
C522	4822 126 11558	0.1μF UP050104Z 50V	C592	4822 122 33656	39pF J CH 50V BLK
C523	4822 126 11554	18pF 50V	C593	4822 126 11559	120pF J CH 50V BLK
C524	5322 122 32072	33pF J CH 50V BLK	C594	4822 122 40589	CERMIC CAP. 0.047
C525	4822 122 33792	10pF 50V	C596	4822 126 11559	120pF J CH 50V BLK
C526	4822 122 31205	47pF J CH 50V BLK	C597	4822 122 40589	CERMIC CAP. 0.047
C527	4822 122 33657	56pF J CH 50V BLK	C600	4822 122 40588	0.022μF TP050F223Z 2
C528	4822 121 41854	0.15μF,J,T,50V	C601	4822 124 41246	47μF/16V 7L
C529	4822 122 40588	0.022μF TP050F223Z 2	C602	4822 122 31173	220pF J SL 50V GRN
C530	4822 122 40588	0.022μF TP050F23Z	C603	4822 122 40568	68pF J CH 50V BLK
C531	4822 122 40589	CERMIC CAP. 0.047	C605	4822 122 40588	0.022μF TP050F223Z T
C533	5322 122 32072	33pF J CH 50V BLK	C606	4822 124 41246	47μF 16V 7L
C534	4822 122 33817	6.8pF UP050068V 50	C609	4822 122 31168	270pF J SL 50V GRN
C535	4822 122 33656	39pF J CH 50V BLK	C610	4822 124 41246	47μF 16V L=7MM
C536	4822 124 21739	22μF/ 16V	C616	4822 124 22048	220μF/6.3V
C537	4822 124 21739	22μF/ 16V	C617	4822 122 40588	0.022μF TP050F223Z T
C540	4822 126 11559	120pF J CH 50V BLK	C618	5322 124 21349	470μF/6.3V
C541	4822 122 33657	56pF J CH 50V BLK	C619	5322 124 21349	470μF/6.3V
C542	4822 121 42609	0.33μF,J,T,50V	C620	4822 126 11557	4.7pF 50V
C543	4822 122 40589	CERMIC CAP. 0.047	C622	4822 122 40588	0.022 μF TP050F23Z 2
C544	4822 126 11556	2.7pF 50V	C625	4822 126 11558	0.1 μF CERAMIC CAP Z
C545	4822 122 33817	6.8pF 50V	C643	4822 122 40588	0.022μF TP050F223Z T
C546	5322 122 32072	33 pF J CH 50V BLK	C644	5322 122 32072	33pF J CH 50V BLK
C547	4822 126 11558	0.1 μF CERAMIC CAP Z	C645	4822 122 31172	180pF J SL 50V GRN
C548	4822 122 10367	150pF J CH 50V BLK	C646	4822 121 42609	0.33μF,J,T,50V
C549	4822 122 40589	0.047 μF TP050F473Z	C647	4822 122 33792	10pF 50V
C550	4822 122 40589	0.047μF UP050TA473Z	C648	4822 121 42722	0.001μF,J,M,50V
C551	4822 122 40588	0.022μF TP050F223Z 2	C649	4822 121 42327	470pF,J,M,50V
C552	4822 124 41153	220μF 16V	C650	4822 122 40588	0.022μF TP050F223Z 2
C553	4822 122 40588	0.022μF TP050F223Z T	C651	4822 122 31172	180pF J SL 50V GRN
C554	4822 124 41246	47μF/ 16V	C657	4822 126 11236	82 pF J CH 50V BLK
C555	4822 122 40588	0.022μF TP050F223Z T	C658	4822 126 11236	82pF J CH 50V BLK
C556	4822 122 40588	0.022μF TP050F223Z T	C660	4822 121 42722	0.001μF,J,M,50V
C557	4822 124 21983	4.7μF/ 50V	C661	4822 122 40588	0.022μF TP050F223Z T
C558	4822 126 11558	0.1μF UP050104Z 5	C662	4822 124 41153	220μF/ 16V
C559	4822 126 11558	0.1μF UP050F223Z T	C663	4822 122 40588	0.022μF TP050F223Z T
C560	4822 124 21739	22μF/ 16V	C664	4822 122 33792	10pF 50V
C561	4822 124 21739	22μF/ 16V	C665	4822 122 33792	10pF 50V
C562	5322 122 32143	22pF J CH 50V BLK	C666	4822 126 11557	4.7pF 50V
C563	4822 122 33657	56pF J CH 50V BLK	C667	4822 126 11236	82pF J CH 50V BLK
C564	4822 126 11236	82pF J CH 50V BLK	C668	4822 124 41153	220μF 16V
C565	4822 122 40589	CERMIC CAP. 0.047	C669	4822 126 11558	0.1μF 50V
C566	4822 122 40589	CERMIC CAP. 0.047	C671	4822 122 40588	0.022μF TP050F223Z T
C567	4822 122 33792	10pF UP050100J 5	C672	4822 124 22048	220μF/6.3V
C568	4822 124 41246	47μF/16V	C673	4822 122 40588	0.022μF TP050F223Z T
C569	4822 122 40588	0.022μF TP050F223Z 2	C674	4822 124 22048	220μF/6.3V
C570	4822 122 40588	0.022μF TP050F223Z T	C675	4822 122 40588	0.022μF TP050F223Z T
C571	4822 122 40588	0.022μF TP050F223Z T	C676	4822 124 22048	220μF/6.3V
C572	4822 124 41153	220μF/ 16V	C679	4822 124 41246	47μF 16V L=7MM
C573	4822 122 40589	CERMIC CAP. 0.047	C680	4822 124 22048	220μF/6.3V
C574	4822 126 11558	0.1μF UP050104Z 5	C681	4822 122 40588	0.022μF TP050F223Z T
C575	4822 122 40588	0.022μF TP050F223Z T	C682	4822 122 40589	0.047μF UP050223Z 5
C576	4822 122 40588	0.022μF TP050F223Z T	C701	4822 122 40588	0.022μF TP050F223Z 2
C577	4822 122 40588	0.022μF TP050F223Z T	C702	4822 124 22048	220μF/6.3V
C578	4822 122 40588	0.022μF TP050F223Z T	C704	4822 126 11558	CERMIC CAP. 0.1μF Z
C579	4822 122 40588	0.022μF TP050F223Z T	C705	4822 124 22048	220μF/6.3V
C580	4822 126 11559	120pF J CH 50V BLK	C706	4822 121 42725	0.0027μF,J,M,50V,D=9
C581	4822 122 40589	CERMIC CAP. 0.047	C707	4822 126 11558	CERMIC CAP. 0.1μF Z
C582	4822 126 11552	12pF 50V	C708	4822 121 42722	1000pF J,M,50V
C584	4822 122 33656	39pF J CH 50V BLK	C710	4822 121 42722	0.001μF,J,M,50V
C585	4822 124 41153	220μF/ 16V	C711	4822 126 11558	CERMIC CAP. 0.1μF Z
C586	4822 122 40588	0.022μF TP050F223Z 2	C712	4822 126 11558	CERMIC CAP. 0.1μF Z
C587	4822 122 40589	CERMIC CAP. 0.047	C714	4822 122 40528	27pF J CH 50V BLK
C588	4822 122 40589	CERMIC CAP. 0.047	C715	4822 122 40528	27pF J CH 50V BLK

PARTSLIST MAIN PCB P506 (continued)



C716	5322 122 32072	33pF J CH 50V BLK
C717	5322 122 32072	33pF J CH 50V BLK
C718	4822 124 41246	47μF/16V
C719	4822 122 40588	0.022μF TP050F223Z 2
C720	4822 124 41246	47μF/16V
C722	4822 125 60165	VCT51G 50PF
C723	4822 126 11554	18pF 50V
C724	4822 125 60165	VCT51G 50PF
C725	4822 126 11554	18pF 50V
C727	4822 125 60165	VCT51G 50PF
C728	4822 122 33657	56pF J CH 50V BLK
C729	4822 121 42722	1000pF J 50V
C730	4822 122 40568	68pF J CH 50V BLK
C731	4822 122 40588	0.022μF TP050F223Z 2
C732	4822 122 40588	0.022μF TP050F223Z T
C733	4822 122 40528	27pF J CH 50V BLK
C734	4822 121 42725	0.0027μF,J,M,50V,D=9
C735	4822 122 33657	56pF J CH 50V BLK
C736	4822 122 33657	56pF J CH 50V BLK
C737	4822 122 40528	27pF J CH 50V BLK
C738	4822 122 40588	0.022μF TP050F223Z T
C741	4822 121 41856	0.022μF,J,M,50V
C742	4822 122 40588	0.022μF TP050F223Z T
C743	4822 121 42697	0.068μF,J,N,50V
C744	4822 121 41856	0.022μF,J,M,50V
C745	4822 121 41854	0.15μF,J,T,50V
C746	4822 122 40588	0.022μF TP050F223Z T
C747	4822 124 41246	47μF/ 16V
C748	4822 122 40588	0.022μF TP050F223Z T
C751	4822 121 42771	0.0022μF,J,M,50V
C752	4822 121 42327	470PF,J,M,50V
C753	4822 122 40588	0.022μF TP050F223Z T
C759	4822 122 40588	0.022μF TP050F223Z T
C760	4822 124 41246	47μF/ 16V
C761	4822 122 40588	0.022μF TP050F223Z T
C770	4822 124 21894	10μF 16V L=7MM
C771	5322 122 32072	33pF J CH 50V BLK
C772	5322 122 32072	33pF J CH 50V BLK
C780	4822 124 41246	47μF/ 16V
C781	4822 124 21983	4.7μF/50V
C782	4822 121 42722	0.001μF,J,M,50V
C783	4822 124 21739	22μF/16V
C784	4822 124 41246	47μF/ 16V
C785	4822 122 33657	56pF J CH 50V BLK
C786	4822 124 21983	4.7μF/50V
C787	4822 122 40588	0.022μF TP050F223Z 2
C788	4822 122 40588	0.022μF TP050F223Z 2
C789	4822 124 41246	47μF/16V
C790	4822 126 11554	18pF 50V UP050180J
C791	4822 126 11559	120pF J CH 50V BLK
C792	4822 122 33792	10pF J CH 50V
C793	4822 122 31172	180pF J SL 50V GRN
C794	4822 122 31168	270pF J SL 50V GRN
C795	4822 122 31172	180pF J SL 50V GRN
C796	4822 121 42327	470pF J,M,50V
C797	4822 124 41246	47μF 16V L=7MM
C798	4822 124 41246	47μF 16V L=7MM
C799	4822 124 41246	47μF/16V
C800	4822 122 40588	0.022μF TP050F223Z 2
C801	4822 122 40588	0.022μF TP050F223Z 2
C802	4822 122 40588	0.022μF TP050F223Z T
C803	4822 122 40588	0.022μF TP050F223Z T
C804	4822 122 31172	180pF J SL 50V GRN
C805	4822 122 31172	180pF J SL 50V GRN
C806	4822 122 31172	180pF J SL 50V GRN
C807	4822 122 31172	180pF J SL 50V GRN



C808	4822 122 31172	180pF J SL 50V GRN
C809	4822 121 41856	0.022μF,J,M,50V
C810	4822 124 40792	4.7μF/ 50V (BP)
C811	4822 121 42609	0.33μF,J,T,50V
C812	4822 121 42722	1000pF,J,M,50V
C813	4822 124 41246	47μF/ 16V
C814	4822 121 42769	1500pF,J,M,50V
C815	4822 122 40528	27pF J CH 50V BLK
C816	4822 124 21739	22μF/16V
C817	4822 121 42697	0.068μF,J,M,50V
C818	4822 121 42697	0.0082μF,J,M,50V,D=9
C819	4822 122 40588	0.022μF TP050F223Z T
C820	4822 122 40588	0.022μF TP050F223Z T
C821	4822 122 40588	0.022μF TP050F223Z T
C822	4822 122 40588	0.022μF TP050F223Z T
C823	4822 122 31172	180pF J SL 50V GRN
C831	4822 124 41246	47μF/ 16V
C832	4822 124 41246	47μF 16V
C833	4822 124 21894	10μF/ 16V
C834	4822 124 41246	47μF 16V
C835	4822 124 41246	47μF 16V
C837	4822 124 22048	220μF/6.3V



DA01	4822 130 33305	1SS176,MA165,1SS254
DA02	4822 130 33305	1SS176,MA165,1SS254
D361	4822 130 33305	1SS176,MA165,1SS254
D362	4822 130 33305	1SS176,MA165,1SS254
D363	4822 130 33305	1SS176,MA165,1SS254
D364	4822 130 33305	1S1555/2473/2076.DS4
D365	4822 130 33305	1SS176,MA165,1SS254
D367	4822 130 33305	1SS176,MA165,1SS254
D368	4822 130 33305	1SS176,MA165,1SS254
D401	4822 130 82608	10DF1-FC3 FAST RECOV
D402	4822 130 82608	10DF1-FC3 FAST RECOV
D403	4822 130 82608	10DF1-FC3 FAST RECOV
D404	4822 130 82608	10DF1-FC3 FAST RECOV
D412	4822 130 33305	1SS176,MA165,1SS254
D421	4822 130 33305	1SS176,MA165,1SS254
D501	4822 130 33305	1SS176,MA165,1SS254
D502	4822 130 33305	1SS176,MA165,1SS254
D511	4822 130 33305	1SS176,MA165,1SS254
D781	4822 130 31542	SVC321SP-B
D801	4822 130 33305	1SS176,MA165,1SS254
D802	4822 130 33305	1SS176,MA165,1SS254
D803	4822 130 33305	1SS176,MA165,1SS254
D804	4822 130 33305	1SS176,MA165,1SS254
D805	4822 130 33305	1SS176,MA165,1SS254
D806	4822 130 33305	1SS176,MA165,1SS254
D807	4822 130 33305	1SS176,MA165,1SS254
D808	4822 130 33305	1SS176,MA165,1SS254
D809	4822 130 33305	1SS176,MA165,1SS254
D810	4822 130 33305	1SS176,MA165,1SS254
D811	4822 130 33305	1SS176,MA165,1SS254
D812	4822 130 33305	1SS176,MA165,1SS254



FA01	4822 242 80283	144-1009-01 2.5MHz
FA02	4822 242 80282	144-1006-01 2.3MHz
FA03	4822 242 80284	144-1008-01 2.8MHz
FA04	4822 242 73896	144-5188-01 684KHz B
FA05	4822 242 73897	144-5074-01 1066KHz
F305	4822 242 73892	135-1032-04 1/7MHz L
F501	4822 242 73901	5.1MHz LPF

PARTSLIST MAIN PCB P506 (continued)

 F502 4822 242 80287 4.5MHz L.P.F. F503 4822 320 50228 63.5US DELAY LIWE BN F510 4822 242 73895 5.9MHzLPF F511 4822 242 73843 DSS306-91-F-223Z NOI F512 4822 242 73843 DSS306-91-F-223Z NOI F711 4822 242 73843 DSS306-91-F-223Z NOI F712 4822 242 73843 DSS306-91-F-223Z NOI F801 4822 242 73843 DSS306-91-F-223Z NOI	 L714 4822 157 62909 LAL02TA220J 22UH L715 4822 157 62909 LAL02TA220J 22UH L716 4822 157 62907 LAL02TA150J 15UH L717 4822 157 62907 LAL02TA150J 15UH L718 4822 157 62907 LAL02TA150J 15UH L719 4822 157 62914 LAL02TA680J 68UH L721 4822 157 62907 LAL02TA150J 15UH L722 4822 157 62907 15UH LAL02TP150J L723 4822 157 62914 68UH LAL02TP680J
 IC36 4822 209 63455 NJM2233BD IC37 4822 209 70082 NJM78L05A IC51 4822 209 30058 TEA7650-V3B IC52 4822 209 63465 MSM7401RS 1H CCD IC53 4822 209 63461 SAA7630P (CCD) IC54 4822 209 30054 MSM7400RS CCD IC55 4822 209 30055 PA0023 VIDEO DEMO IC56 4822 209 63464 TBC-MA IC57 4822 209 60753 TBC-MD IC58 4822 209 61187 BA15218 IC59 4822 209 61187 BA15218 IC60 4822 209 61187 BA15218 IC61 4822 209 70082 NJM78L05A IC62 4822 209 63455 NJM2233BD IC63 4822 209 63455 NJM2233BD IC64 4822 209 63455 NJM2233BD IC65 4822 209 63455 NJM2233BD IC90 4822 209 63747 HA12127ANT IC91 4822 209 60626 DSC-M2 IC92 4822 209 63468 NJM082D IC93 4822 209 61187 BA15218 IC95 4822 209 83839 UPD4053BC	 QA01 4822 130 42298 2SC536SP,2SC2458,2SC QA02 4822 130 42298 C536SP,C2458,C3311,C QA03 4822 130 42298 C536SP,C2458,C3311,C QA04 4822 130 42298 C536SP,C2458,C3311,C QA05 4822 130 42715 2SA608SP,2SA1048,2SA QA08 4822 130 42298 CS36SP,C2458,C3311,C QA09 4822 130 42298 C536SP,C2458,C3311,C QA10 4822 130 42298 C536SP,C2458,C3311,C QA11 4822 130 42298 C536SP,C2458,C3311,C QA12 4822 130 42298 C536SP,C2458,C3311,C QA21 4822 130 42298 C536SP,C2458,C3311,C QA22 4822 130 42298 C536SP,C2458,C3311,C QG01 4822 130 42715 2SA608SP,2SA1048,2SA QG02 4822 130 42298 2SC536SP,2SC2458,2SC QG03 4822 130 42715 A608SP,A1048,A1309,A QG04 4822 130 42298 C536SP,C2458,C3311,C QG05 4822 130 42298 C536SP,C2458,C3311,C QG06 4822 130 42683 DRC124ES (TP) QG67 4822 130 42298 C536SP,C2458,C3311,C Q301 4822 130 42298 2SC536SP,2SC2458,2SC Q302 4822 130 42298 C536SP,C2458,C3311,C Q303 4822 130 42298 C536SP,C2458,C3311,C Q304 4822 130 42298 C536SP,C2458,C3311,C Q305 4822 130 42298 C536SP,C2458,C3311,C Q306 4822 130 42298 C536SP,C2458,C3311,C Q307 4822 130 42298 C536SP,C2458,C3311,C Q358 4822 130 43818 2SC2878-A Q365 4822 130 42683 DTC124ES (TP) Q368 4822 130 42593 DTA124ES (TP) Q369 4822 130 42593 DTA124ES (TP) Q401 4822 130 61179 2SD2037 E OR F 50V 1 Q402 4822 130 61176 2SB1357 E OR F 50V 1 Q405 4822 130 43818 2SC2878 Q406 4822 130 43818 2SC2878 Q407 4822 130 42715 2SA608SP,2SA1048,2SA Q409 4822 130 42593 DTA124ES (TP) Q410 4822 130 42683 DTC124ES (TP) Q501 4822 130 42715 A608SP,A1048,A1309,A Q502 4822 130 42298 C536SP,C2458,C3311,C Q503 4822 130 42298 C536SP,C2458,C3311,C Q504 4822 130 42715 A608SP,A1048,A1309,A Q505 4822 130 42298 C536SP,C2458,C3311,C Q506 4822 130 42298 C536SP,C2458,C3311,C Q508 4822 130 42298 C536SP,C2458,C3311,C Q509 4822 130 42298 C536SP,C2458,C3311,C Q510 4822 130 42298 C536SP,C2458,C3311,C Q511 4822 130 42298 C536SP,C2458,C3311,C Q512 4822 130 42683 DTC124ES (TP) Q513 4822 130 42298 C536SP,C2458,C3311,C Q514 4822 130 42715 A608SP,A1048,A1309,A Q515 4822 130 42715 A608SP,A1048,A1309,A Q516 4822 130 61441 2SD1862 Q517 4822 130 42715 A608SP,A1048,A1309,A Q518 4822 130 61441 2SD1862
 LA01 4822 157 62898 LAL02TA181J 180UH L301 4822 157 62901 EL0607RA392J 3.9MH LG16 4822 157 62909 LAL02TA220J 22UH L411 4822 280 20448 RA9W-K TAKAMIZAWA L501 4822 157 62912 LAL02TA560J 56UH L502 4822 157 62899 LAL02TA221J 220UH L503 4822 157 62921 LAL02TA151J 150UH L504 4822 157 62922 LAL02TA330J 33UH L505 4822 157 62906 LAL02TA120J 12UH L506 4822 157 62906 LAL02TA120J 12UH L507 4822 157 62906 LAL02TA120J 12UH L508 4822 157 62906 LAL02TA120J 12UH L509 4822 157 62906 LAL02TA120J 12UH L510 4822 157 62906 LAL02TA120J 12UH L511 4822 157 63312 5.6UH LAL02TP056J L512 4822 157 62902 6.8UH LAL02TP068J L513 4822 157 62906 LAL02TA120J 12UH L514 4822 157 62907 LAL02TA150J 15UH L516 4822 157 62898 LAL02TA181J 180UH L517 4822 157 62907 LAL02TA150J 15UH L518 4822 157 62907 LAL02TA150J 15UH L519 4822 157 62912 LAL02TA560J 56UH L520 4822 157 62911 LAL02TA3R3J 3.3UH L522 4822 157 62909 LAL02TA220J 22UH L523 4822 157 62899 LAL02TA221J 220UH L526 4822 157 62922 LAL02TA330J 33UH L527 4822 157 62912 LAL02TA560J 56UH L529 4822 157 62912 LAL02TA560J 56UH L530 4822 157 62913 EL0606-561J 560UH L542 4822 157 62909 LAL02TA220J 22UH L543 4822 157 62909 LAL02TA220J 22UH	

PARTSLIST MAIN PCB P506 (continued)



Q519	4822 130 42683	DTC124ES (TP)
Q520	4822 130 42683	DTC124ES (TP)
Q521	4822 130 42298	C536SP,C2458,C3311,C
Q522	4822 130 42298	C536SP,C2458,C3311,C
Q523	4822 130 42683	DTC124ES (TP)
Q524	4822 130 42298	C536SP,C2458,C3311,C
Q525	4822 130 42715	A608SP,A1048,A1309,A
Q526	4822 130 42298	C536SP,C2458,C3311,C
Q527	4822 130 42715	A608SP,A1048,A1309,A
Q528	4822 130 61441	2SD1862
Q529	4822 130 61417	2SB1240
Q530	4822 130 42715	A608SP,A1048,A1309,A
Q531	4822 130 42715	A608SP,A104S,A1309,A
Q532	4822 130 42298	C536SP,C2458,C3311,C
Q536	4822 130 42715	A608SP,A1048,A1309,A
Q537	4822 130 42715	A608SP,A1048,A1309,A
Q539	4822 130 42715	A608SP,A1048,A1309,A
Q540	4822 130 42298	C536SP,C2458,C3311,C
Q541	4822 130 42298	C536SP,C2458,C3311,C
Q546	4822 130 60886	2SC1923 Y
Q547	4822 130 42298	C536SP,C2458,C3311,C
Q561	4822 130 42298	C536SP,C2458,C3311,C
Q562	4822 130 42298	C536SP,C2458,C3311,C
Q575	4822 130 60886	2SC1923 Y
Q576	4822 130 42715	A608SP,A1048,A1309,A
Q582	4822 130 61438	2SA1005 L OR K
Q583	4822 130 61438	2SA1005 L OR K
Q584	4822 130 60886	2SC1923 Y
Q585	4822 130 60886	2SC1923 Y
Q586	4822 130 42298	C536SP,C2458,C3311,C
Q601	4822 130 42683	DTC124ES (TP)
Q702	4822 130 61438	2SA1005
Q703	4822 130 42683	DTC124ES (TP)
Q704	4822 130 42298	2SC536SP,2SC2458,2SC
Q705	4822 130 42298	C536SP,C2458,C3311,C
Q706	4822 130 42298	C536SP,C2458,C3311,C
Q707	4822 130 42715	2SA608SP,2SA1048,2SA
Q708	4822 130 42683	DTC124ES (TP)
Q709	4822 130 42683	DTC124ES (TP)
Q713	4822 130 42593	DTA124ES
Q715	4822 130 42298	C536SP,C2458,C3311,C
Q716	4822 130 42298	C536SP,C2458,C3311,C
Q717	4822 130 42298	C536SP,C2458,C3311,C
Q718	4822 130 42298	C536SP,C2458,C3311,C
Q719	4822 130 42298	C536SP,C2458,C3311,C
Q721	4822 130 42683	DTC124ES (TP)
Q801	4822 130 42298	2SC536SP,2SC2458,2SC
Q802	4822 130 42298	C536SP,C2458 C3311



RA01	4822 116 52231	12K Ω +- 5% 1/6W
RA02	4822 050 11002	1K Ω +- 5% 1/6W
RA03	4822 116 52269	3.3K Ω +- 5% 1/6
RA04	4822 116 52215	220 Ω +- 5% 1/6W
RA05	4822 116 52296	6.8K Ω +- 5% 1/6W
RA06	4822 116 52207	1.2K Ω +- 5% 1/6
RA07	4822 116 52269	3.3K Ω +- 5% 1/6W
RA08	4822 116 52207	1.2K Ω +- 5% 1/6
RA09	4822 111 41355	75 Ω +- 5% 1/6W
RA10	4822 116 52202	82 Ω +- 5% 1/6
RA11	4822 116 52202	82 Ω +- 5% 1/6
RA12	4822 116 52228	680 Ω +- 5% 1/6
RA13	4822 116 52243	1.5K Ω +- 5% 1/6
RA14	4822 050 11002	1K Ω +- 5% 1/6
RA15	4822 050 11002	1K Ω +- 5% 1/6



RA16	4822 050 11002	1K Ω +- 5% 1/6
RA17	4822 050 11002	1K Ω +- 5% 1/6
RA21	4822 050 11002	1K Ω J 1/6W
RA22	4822 050 11002	1K Ω J 1/6W
RA23	4822 116 52284	47K Ω +- 5% 1/6W
RA24	4822 116 52284	47K Ω +- 5% 1/6W
RA31	4822 116 52289	5.6K Ω +- 5% 1/6W
RA32	4822 116 52296	6.8K Ω +- 5% 1/6
RA33	4822 116 52283	4.7K Ω +- 5% 1/6
RA34	4822 116 52283	4.7K Ω +- 5% 1/6
RA35	4822 116 52296	6.8K Ω +- 5% 1/6
RA36	4822 116 52296	6.8K Ω +- 5% 1/6
RA37	4822 116 52249	1.8K Ω +- 5% 1/6
RA38	4822 116 52249	1.8K Ω +- 5% 1/6
RA39	4822 116 52283	4.7K Ω +- 5% 1/6
RA40	4822 116 52283	4.7K Ω +- 5% 1/6
RA41	4822 116 52234	100K Ω +- 5% 1/6
RA42	4822 116 52234	100K Ω +- 5% 1/6
RA43	4822 116 52244	15K Ω +- 5% 1/6
RA44	4822 116 52244	15K Ω +- 5% 1/6W
RA45	4822 116 52257	22K Ω +- 5% 1/6
RA46	4822 116 52257	22K Ω +- 5% 1/6
RA47	4822 116 52296	6.8K Ω +- 5% 1/6
RA48	4822 116 52296	6.8K Ω +- 5% 1/6
RA49	4822 116 52284	47K Ω +- 5% 1/6
RA50	4822 116 52284	47K Ω +- 5% 1/6
RA53	4822 116 52244	15K Ω J 1/6W
RA55	4822 116 52234	100K Ω +- 5% 1/6
RA56	4822 116 52244	15K Ω +- 5% 1/6
RA57	4822 116 52231	12K Ω +- 5% 1/6
RA59	4822 050 19103	91K Ω +- 5% 1/6
RA60	4822 116 52283	4.7K Ω +- 5% 1/6W
RA61	4822 116 52245	150K Ω +- 5% 1/6
RA62	4822 116 52234	100K Ω +- 5% 1/6
RA63	4822 116 52245	150K Ω +- 5% 1/6
RA71	4822 116 52175	100 Ω J 1/6W
RA72	4822 050 11002	1K Ω J 1/6W
RA73	4822 116 52226	560 Ω J 1/6W
RA74	4822 050 11002	1K Ω J 1/6W
RA76	4822 050 11002	1K Ω J 1/6W
RA77	4822 050 11002	1K Ω J 1/6W
RA78	4822 050 11002	1K Ω J 1/6W
RA79	4822 050 11002	1K Ω J 1/6W
RA81	4822 116 52284	47K Ω J 1/6W
RA82	4822 116 52283	4.7K Ω J 1/6W
RA83	4822 116 52235	1M Ω +- 5% 1/6W
RA84	4822 116 52235	1M Ω +- 5% 1/6W
RA90	4822 116 52284	47K Ω J 1/6W
RA91	4822 116 52284	47K Ω J 1/6W
RA92	4822 116 52283	4.7K Ω J 1/6W
RA93	4822 116 52263	2.7K Ω J 1/6W
RA94	4822 116 52284	47K Ω J 1/6W
RA95	4822 116 52284	47K Ω J 1/6W
RA96	4822 116 52284	47K Ω J 1/6W
RA97	4822 116 52296	6.8K Ω J 1/6W
RG01	4822 116 52207	1.2K Ω +- 5% 1/6
RG02	4822 050 11002	1K Ω +- 5% 1/6W
RG11	4822 116 52257	22K Ω J 1/6W
RG12	4822 116 52289	5.6K Ω J 1/6W
RG13	4822 116 52296	6.8K Ω +- 5% 1/6
RG14	4822 116 52224	470 Ω +- 5% 1/6
RG15	4822 116 52215	220 Ω +- 5% 1/6W
RG16	4822 050 11002	1K Ω +- 5% 1/6
RG17	4822 050 11002	1K Ω +- 5% 1/6
RG18	4822 116 52243	1.5K Ω +- 5% 1/6
RG22	4822 116 52197	56 Ω +- 5% 1/6W

PARTSLIST MAIN PCB P506 (continued)



RG23	4822 116 52197	56 Ω +- 5% 1/6W
RG31	4822 116 52284	47K Ω +- 5% 1/6W
RG32	4822 116 52233	10K Ω +- 5% 1/6W
RG35	4822 050 11002	1K Ω +- 5% 1/6W
RG36	4822 116 52197	56 Ω +- 5% 1/6W
RG37	4822 116 52175	100 Ω +- 5% 1/6W
R301	4822 116 52264	27K Ω +-5% 1/6W
R302	4822 116 52296	6.8K Ω +- 5% 1/6
R303	4822 116 52207	1.2K Ω +- 5% 1/6W
R304	4822 116 52224	470 Ω +- 5% 1/6
R305	4822 116 52219	470 Ω +- 5% 1/6
R306	4822 050 11002	1K Ω +- 5% 1/6W
R307	4822 116 52215	220 Ω +- 5% 1/6W
R308	4822 116 52222	390 Ω +- 5% 1/6
R309	4822 116 52256	2.2K Ω +- 5% 1/6
R310	4822 116 52233	10K Ω +- 5% 1/6
R311	4822 116 52269	3.3K Ω +- 5% 1/6
R312	4822 050 11002	1K Ω +- 5% 1/6
R313	4822 116 52226	560 Ω +- 5% 1/6W
R314	4822 050 11002	1K Ω +- 5% 1/6
R315	4822 116 52283	4.7K Ω +- 5% 1/6
R316	4822 116 52296	6.8K Ω +- 5% 1/6
R317	4822 116 52207	1.2K Ω +- 5% 1/6
R318	4822 116 52228	680 Ω +- 5% 1/6
R319	4822 116 52219	330 Ω +- 5% 1/6
R320	4822 116 52219	330 Ω +- 5% 1/6W
R321	4822 116 52175	100 Ω +- 5% 1/6
R322	4822 116 52296	6.8K Ω +- 5% 1/6W
R323	4822 116 52224	470 Ω +- 5% 1/6W
R324	4822 116 52217	270 Ω +- 5% 1/6W
R326	4822 116 52233	10K Ω +- 5% 1/6
R327	4822 050 11002	1K Ω +- 5% 1/6
R359	4822 116 52283	4.7K Ω +- 5% 1/6
R360	4822 116 52283	4.7K Ω +- 5% 1/6
R378	4822 116 52283	4.7K Ω +- 5% 1/6
R379	4822 050 11002	1K Ω +- 5% 1/6
R392	4822 116 52283	4.7K Ω +- 5% 1/6
R393	4822 116 52283	4.7K Ω +- 5% 1/6
R394	4822 116 52283	4.7K Ω +- 5% 1/6
R395	4822 116 52283	4.7K Ω +- 5% 1/6
R396	4822 116 52283	4.7K Ω +- 5% 1/6
R397	4822 116 52283	4.7K Ω +-5% 1/6W
R398	4822 116 52234	100K Ω +- 5% 1/6
R399	4822 116 52234	100K Ω +- 5% 1/6
R461	4822 116 52233	10K Ω +- 5% 1/6
R462	4822 116 52283	4.7K Ω +- 5% 1/6
R463	4822 116 52215	220 Ω +- 5% 1/6
R464	4822 116 52215	220 Ω +- 5% 1/6
R465	4822 116 52215	220 Ω +- 5% 1/6
R466	4822 116 52215	220 Ω +- 5% 1/6
R469	4822 116 52197	56 Ω +- 5% 1/6
R470	4822 116 52256	2.2K Ω +- 5% 1/6
R471	4822 116 52256	2.2K Ω +- 5% 1/6
R472	4822 116 52283	4.7K Ω +- 5% 1/6
R473	4822 116 52283	4.7K Ω +- 5% 1/6
R481	4822 116 60446	3.3 Ω J 1/4W
R482	4822 116 60446	3.3 Ω J 1/4W
R483	4822 116 52175	100 Ω +-5% 1/6W
R484	4822 116 52175	100 Ω +-5% 1/6W
R492	4822 116 52233	10K Ω +- 5% 1/6
R493	4822 116 52283	4.7K Ω +- 5% 1/6
R501	4822 116 52231	12K Ω +- 5% 1/6
R502	4822 116 52296	6.8K Ω +- 5% 1/6
R504	4822 116 52226	560 Ω +- 5% 1/6
R505	4822 116 52228	680 Ω +- 5% 1/6
R507	4822 116 52233	10K Ω +- 5% 1/6



R508	4822 116 52233	10K Ω +- 5% 1/6
R509	4822 100 11351	10K Ω VER,RES
R510	4822 116 52226	560 Ω +- 5% 1/6
R511	4822 100 11351	10K Ω VER,RES
R512	4822 116 52284	47K Ω +- 5% 1/6
R513	4822 116 52283	4.7K Ω +- 5% 1/6W
R514	4822 116 52226	560 Ω +- 5% 1/6
R516	4822 116 52284	47K Ω +- 5% 1/6
R517	4822 116 52283	4.7K Ω +- 5% 1/6W
R518	4822 116 52226	560 Ω +- 5% 1/6
R520	4822 050 22209	22 Ω +- 5% 1/4W
R521	4822 116 52269	3.3K Ω +- 5% 1/6
R522	4822 116 52296	6.8K Ω +- 5% 1/6
R523	4822 116 52269	3.3K Ω +- 5% 1/6W
R524	4822 116 52226	560 Ω +- 5% 1/6
R526	4822 111 41355	75 Ω +- 5% 1/6
R527	4822 111 41355	75 Ω J 1/6W
R529	4822 050 11002	1K Ω +- 5% 1/6
R530	4822 050 11002	1K Ω +- 5% 1/6
R531	4822 050 11002	1K Ω +- 5% 1/6
R532	4822 050 11002	1K Ω +- 5% 1/6W
R534	4822 116 52296	6.8K Ω +- 5% 1/6W
R535	4822 050 11002	1K Ω +- 5% 1/6
R536	4822 116 52256	2.2K Ω +- 5% 1/6
R537	4822 116 52256	2.2K Ω +- 5% 1/6
R538	4822 116 52269	3.3K Ω +- 5% 1/6W
R539	4822 116 52303	8.2K Ω +- 5% 1/6
R540	4822 116 52303	8.2K Ω +- 5% 1/6
R541	4822 116 52233	10K Ω +- 5% 1/6W
R542	4822 116 52197	56 Ω +- 5% 1/6
R543	4822 116 52284	47K Ω +- 5% 1/6W
R544	4822 116 52243	1.5K Ω +- 5% 1/6W
R545	4822 116 52283	4.7K Ω +- 5% 1/6W
R546	4822 116 52249	1.8K Ω +- 5% 1/6W
R547	4822 050 11002	1K Ω +- 5% 1/6
R548	4822 050 11002	1K Ω +- 5% 1/6
R549	4822 116 52243	1.5K Ω +- 5% 1/6
R550	4822 116 52207	1.2K Ω +- 5% 1/6W
R551	4822 116 52243	1.5K Ω +- 5% 1/6W
R552	4822 050 11002	1K Ω +- 5% 1/6
R553	4822 116 52284	47K Ω +- 5% 1/6W
R554	4822 116 52296	6.8K Ω +- 5% 1/6
R555	4822 115 90167	10 Ω +- 2% 1/4W
R556	4822 116 52226	560 Ω +- 5% 1/6
R557	4822 050 11002	1K Ω +- 5% 1/6
R558	4822 111 91404	150 Ω +- 5% 1/6W
R560	4822 115 90167	10 Ω +- 2% 1/4W
R561	4822 116 52207	1.2K Ω +- 5% 1/6
R562	4822 116 52175	100 Ω +- 5% 1/6
R563	4822 116 52226	560 Ω +- 5% 1/6
R564	4822 050 11002	1K Ω +- 5% 1/6
R565	4822 116 52175	100 Ω +- 5% 1/6
R566	4822 116 52228	680 Ω +- 5% 1/6W
R567	4822 116 52233	10K Ω +- 5% 1/6W
R568	4822 116 52175	100 Ω +- 5% 1/6
R569	4822 050 11002	1K Ω +- 5% 1/6
R570	4822 116 52245	150K Ω +- 5% 1/6
R571	4822 116 52245	150K Ω +- 5% 1/6
R572	4822 116 52284	47K Ω +- 5% 1/6
R573	4822 116 52256	2.2K Ω +- 5% 1/6
R574	4822 116 52197	56 Ω +- 5% 1/6
R575	4822 116 52175	100 Ω +- 5% 1/6
R576	4822 050 11002	1K Ω +- 5% 1/6
R577	4822 116 52219	330 Ω +- 5% 1/6
R578	4822 116 52207	1.2K Ω +- 5% 1/6
R579	4822 116 52224	470 Ω +- 5% 1/6

PARTSLIST MAIN PCB P506 (continued)



R580	4822 116 52175	100 Ω $\pm$ 5% 1/6
R581	4822 050 11002	1K Ω $\pm$ 5% 1/6
R582	4822 050 11002	1K Ω $\pm$ 5% 1/6
R583	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R584	4822 050 11002	1K Ω $\pm$ 5% 1/6
R587	4822 116 52226	560 Ω $\pm$ 5% 1/6W
R588	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R589	4822 116 52233	10K Ω $\pm$ 5% 1/6
R590	4822 116 52296	6.8K Ω $\pm$ 5% 1/6
R591	4822 116 52296	6.8K Ω $\pm$ 5% 1/6
R594	4822 116 52296	6.8K Ω $\pm$ 5% 1/6
R595	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R596	4822 116 52226	560 Ω $\pm$ 5% 1/6W
R597	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R601	4822 116 52263	2.7K Ω $\pm$ 5% 1/6
R602	4822 116 52224	470 Ω $\pm$ 5% 1/6W
R603	4822 116 52243	1.5K Ω $\pm$ 5% 1/6W
R604	4822 050 11002	1K Ω $\pm$ 5% 1/6
R605	4822 115 90167	10 Ω $\pm$ 2% 1/4W
R606	4822 116 52215	220 Ω $\pm$ 5% 1/6W
R608	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R609	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R610	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R611	4822 116 52233	10K Ω $\pm$ 5% 1/6
R613	4822 116 52215	220 Ω $\pm$ 5% 1/6W
R614	4822 116 52226	560 Ω $\pm$ 5% 1/6W
R615	4822 116 52211	150 Ω $\pm$ 5% 1/6W
R617	4822 116 52175	100 Ω $\pm$ 5% 1/6
R618	4822 116 52217	270 Ω 1/6W $\pm$ 5%
R619	4822 111 41355	75 Ω $\pm$ 5% 1/6
R620	4822 116 52175	100 Ω $\pm$ 5% 1/6
R621	4822 111 41355	75 Ω $\pm$ 5% 1/6
R622	4822 100 11755	220 Ω RH0634CJ2R
R623	4822 116 52226	560 Ω $\pm$ 5% 1/6W
R624	4822 116 52256	2.2K Ω $\pm$ 5% 1/6W
R625	4822 116 52211	150 Ω $\pm$ 5% 1/6W
R626	4822 116 52217	270 Ω 1/6W $\pm$ 5%
R627	4822 116 52226	560 Ω $\pm$ 5% 1/6W
R630	4822 116 52213	180 Ω $\pm$ 5% 1/6W
R631	4822 116 52263	2.7K Ω $\pm$ 5% 1/6
R632	4822 050 11002	1K Ω $\pm$ 5% 1/6
R637	4822 116 52256	2.2K Ω $\pm$ 5% 1/6W
R638	4822 116 52256	2.2K Ω $\pm$ 5% 1/6W
R639	4822 116 52224	470 Ω $\pm$ 5% 1/6W
R640	4822 100 11426	RH0634CS2R TYPE 470
R641	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R642	4822 116 52256	2.2K Ω $\pm$ 5% 1/6W
R644	4822 116 52213	180 Ω 1/6W $\pm$ 5%
R645	4822 116 52224	470 Ω $\pm$ 5% 1/6
R646	4822 116 52206	120 Ω 1/6W $\pm$ 5%
R647	4822 050 11002	1K Ω 1/6W $\pm$ 5%
R648	4822 116 52224	470 Ω $\pm$ 5% 1/6
R649	4822 116 52224	470 Ω $\pm$ 5% 1/6
R678	4822 116 52233	10K Ω $\pm$ 5% 1/6
R679	4822 116 52231	820 Ω $\pm$ 5% 1/6
R681	4822 116 52234	100K Ω $\pm$ 5% 1/6
R682	4822 116 52284	47K Ω $\pm$ 5% 1/6
R683	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R685	4822 116 52215	220 Ω 1/6W $\pm$ 5%
R686	4822 050 11002	1K Ω $\pm$ 5% 1/6
R687	4822 100 11386	1K Ω RH0634C13R TYP
R688	4822 116 52263	2.7K Ω $\pm$ 5% 1/6
R689	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R690	4822 116 52211	150 Ω $\pm$ 5% 1/6
R691	4822 116 52175	100 Ω $\pm$ 5% 1/6
R692	4822 116 52211	150 Ω $\pm$ 5% 1/6



R693	4822 116 52175	100 Ω $\pm$ 5% 1/6
R694	4822 116 52175	100 Ω $\pm$ 5% 1/6
R695	4822 116 52175	100 Ω $\pm$ 5% 1/6
R696	4822 116 52283	4.7K Ω $\pm$ 5% 1/6
R697	4822 116 52283	4.7K Ω $\pm$ 5% 1/6
R698	4822 116 52217	270 Ω $\pm$ 5% 1/6
R699	4822 050 11002	1K Ω $\pm$ 5% 1/6
R700	4822 116 52256	2.2K Ω $\pm$ 5% 1/6
R702	4822 116 52256	2.2K Ω $\pm$ 5% 1/6
R703	4822 116 52284	47K Ω $\pm$ 5% 1/6
R704	4822 116 52211	150 Ω $\pm$ 5% 1/6W
R705	4822 116 52211	150 Ω $\pm$ 5% 1/6W
R706	4822 116 52283	4.7K Ω $\pm$ 5% 1/6
R707	4822 116 52175	100 Ω $\pm$ 5% 1/6W
R710	4822 116 52226	560 Ω $\pm$ 5% 1/6
R712	4822 116 52219	330 Ω $\pm$ 5% 1/6
R714	4822 116 52219	330 Ω $\pm$ 5% 1/6
R718	4822 116 52233	10K Ω $\pm$ 5% 1/6W
R719	4822 116 52226	560 Ω $\pm$ 5% 1/6W
R720	4822 116 52284	47K Ω $\pm$ 5% 1/6
R721	4822 116 52297	68K Ω $\pm$ 5% 1/6
R722	4822 116 52264	27K Ω $\pm$ 5% 1/6
R723	4822 116 52297	68K Ω $\pm$ 5% 1/6
R724	4822 116 52244	15K Ω $\pm$ 5% 1/6
R725	4822 116 52226	560 Ω $\pm$ 5% 1/6
R726	4822 050 11002	1K Ω $\pm$ 5% 1/6
R727	4822 116 52303	8.2K Ω $\pm$ 5% 1/6
R728	4822 116 52245	150K Ω $\pm$ 5% 1/6
R729	4822 116 52269	3.3K Ω $\pm$ 5% 1/6
R730	4822 050 11002	1K Ω $\pm$ 5% 1/6
R731	4822 116 52284	47K Ω $\pm$ 5% 1/6W
R732	4822 116 52284	47K Ω $\pm$ 5% 1/6W
R735	4822 116 52235	1M Ω $\pm$ 5% 1/6
R736	4822 050 11002	1K Ω J 1/6W
R737	4822 100 11351	10K Ω RH0634C14R TY
R738	4822 116 52233	10K Ω $\pm$ 5% 1/6W
R740	4822 050 12404	240K Ω $\pm$ 5% 1/6
R741	4822 050 19103	91K Ω $\pm$ 5% 1/6
R742	4822 116 52271	33K Ω J 1/6W
R743	4822 116 52291	56K Ω $\pm$ 5% 1/6
R744	4822 116 52291	56K Ω $\pm$ 5% 1/6
R745	4822 116 52291	56K Ω $\pm$ 5% 1/6
R751	4822 116 52296	6.8K Ω $\pm$ 5% 1/6
R752	4822 116 52257	22K Ω $\pm$ 5% 1/6
R753	4822 116 52249	1.8K Ω $\pm$ 5% 1/6
R754	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R755	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R756	4822 115 90167	10 Ω $\pm$ 2% 1/4W
R757	4822 115 90167	10 Ω $\pm$ 2% 1/4W
R758	4822 116 52243	1/5K Ω $\pm$ 5% 1/6W
R760	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R761	4822 116 52233	10K Ω $\pm$ 5% 1/6W
R762	4822 116 52269	3.3K Ω $\pm$ 5% 1/6W
R763	4822 116 52224	470 Ω $\pm$ 5% 1/6W
R764	4822 116 52197	56 Ω $\pm$ 5% 1/6W
R765	4822 116 52219	330 Ω $\pm$ 5% 1/6W
R766	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R767	4822 116 52233	10K Ω $\pm$ 5% 1/6W
R768	4822 116 52233	10K Ω $\pm$ 5% 1/6W
R769	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R770	4822 116 52215	220 Ω $\pm$ 5% 1/6W
R771	4822 116 52284	47K Ω $\pm$ 5% 1/6W
R772	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R773	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R774	4822 116 52224	470 Ω $\pm$ 5% 1/6W
R775	4822 050 11002	1K Ω $\pm$ 5% 1/6W

PARTSLIST MAIN PCB P506 (continued)

 R776 4822 050 11002 1K Ω +- 5% 1/6W R780 4822 116 52244 15K Ω +- 5% 1/6 R781 4822 116 52265 270K Ω +- 5% 1/6 R782 4822 100 11352 22K Ω RH0634CJ4R TY R783 4822 116 52234 100K Ω +- 5% 1/6 R784 4822 116 52283 4.7K Ω +- 5% 1/6 R785 4822 116 52283 4.7K Ω +- 5% 1/6 R786 4822 116 52258 220K Ω +- 5% 1/6W R787 4822 050 11002 1K Ω +- 5% 1/6 R788 4822 116 52219 330 Ω +- 5% 1/6W R790 4822 116 52207 1.2K Ω +- 5% 1/6 R793 4822 050 11002 1K Ω +- 5% 1/6W R794 4822 116 52256 2.2K Ω +- 5% 1/6W R801 4822 050 11002 1K Ω +- 5% 1/6 R802 4822 050 11002 1K Ω +- 5% 1/6 R803 4822 116 52224 470 Ω +- 5% 1/6 R804 4822 116 52224 470 Ω +- 5% 1/6 R805 4822 116 52224 470 Ω +- 5% 1/6 R806 4822 116 52224 470 Ω +- 5% 1/6 R807 4822 116 52224 470 Ω +- 5% 1/6 R808 4822 116 52234 100K Ω +- 5% 1/6 R809 4822 116 52234 100K Ω +- 5% 1/6 R810 4822 050 11002 1K Ω +- 5% 1/6 R811 4822 116 52297 68K Ω +- 5% 1/6 R812 4822 116 52249 1.8K Ω +- 5% 1/6 R813 4822 116 52249 1.8K Ω +- 5% 1/6 R814 4822 116 52271 33K Ω +-5% 1/6W R815 4822 116 52234 100K Ω +-5% 1/6W R816 4822 116 52284 47K Ω +- 5% 1/6 R817 4822 116 52231 12K Ω +- 5% 1/6 R818 4822 050 11002 1K Ω +- 5% 1/6 R819 4822 116 52234 100K Ω +- 5% 1/6 R820 4822 116 52289 5.6K Ω +- 5% 1/6 R821 4822 116 52283 4.7K Ω +- 5% 1/6 R822 4822 116 52233 10K Ω +- 5% 1/6 R824 4822 116 52233 10K Ω +-5% 1/6W R825 4822 116 52224 470 Ω +- 5% 1/6W R826 4822 116 52265 270K Ω +- 5% 1/6 R827 4822 116 52283 4.7K Ω +- 5% 1/6 R828 4822 116 52296 6.8K Ω +- 5% 1/6 R829 4822 116 52284 47K Ω +- 5% 1/6 R830 4822 116 52256 2.2K Ω +- 5% 1/6 R831 4822 116 52233 10K Ω +- 5% 1/6 R832 4822 116 52256 2.2K Ω +- 5% 1/6 R833 4822 116 52284 47K Ω +- 5% 1/6 R834 4822 116 52283 4.7K Ω +- 5% 1/6W R835 4822 115 90167 10 Ω +- 2" 1/4W R836 4822 115 90167 10 Ω +- 2% 1/4W R840 4822 116 52283 4.7K Ω +- 5% 1/6 R841 4822 116 52283 4.7K Ω +-5% 1/6W	 X701 4822 242 73902 AT49 15MHz XTAL X702 4822 242 80288 AT49/14.31818MHz(TP) X703 4822 242 73903 17MHz X-TAL AT-49  Z301 4822 130 80932 6.2V ZENER EQUIVALEN Z501 4822 130 80321 MTZJ10C Z506 4822 130 80318 6.8V ZENER EQUIVALEN Z507 4822 130 31554 4.3V ZENER EQUIVALEN Z516 4822 130 80319 9.1V ZENER EQUIVALEN Z517 4822 130 80319 9.1V ZENER EQUIVALEN Z706 4822 130 80132 3.9V ZENER EQUIVALEN Z707 4822 130 80132 3.9V ZENER EQUIVALEN Z711 4822 130 80316 3.6V ZENER EQUIVALEN Misellaneous J401 4822 290 60998 3P RCA PIN JACK (GOL J402 4822 290 60998 3P RCA PIN JACK (GOL J403 4822 267 41009 2P RCA PIN JACK J404 4822 267 31369 OPTICAL OUT TERMINAL
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PARTSLIST DIGITAL AUDIO P306

								
C315	4822 126 11567	0.022μF +- 10% R 16	C440	4822 126 11562	100pF (GR39) 50V			
C316	4822 126 11567	0.022μF +- 10% R 16	C441	4822 121 42722	0.001μF, J,M,50V			
C317	4822 126 11568	470pF (GR39) 50V CH	C442	4822 121 42722	0.001μF, J,M,50V			
C318	4822 126 11568	470pF (GR39) 50V CH	C443	4822 121 43927	150P 50V ECH-R			
C319	4822 126 11566	2200pF (GR39) 50V CH	C444	4822 121 43927	150P 50V ECH-R			
C320	4822 121 42698	0.1μF, J,N,50V	C445	4822 124 23777	4.7μF 10V 6.3X 11 AR			
C321	4822 124 21983	4.7μF 50V	C446	4822 124 23777	4.7μF 10V 6.3X 11 AR			
C322	4822 124 21894	10μF 16V	C447	4822 124 23777	4.7μF 10V 6.3X 11 AR			
C323	4822 126 11565	10000pF (GR39) 25V C	C448	4822 124 23777	4.7μF 10V 6.3X 11 AR			
C350	4822 122 32698	4700P 50V CHIP	C449	4822 124 23778	100μF 16V 6.3X 11 AR			
C351	5322 121 42491	0.047μF, J,N,50V	C450	4822 124 23778	100μF 16V 6.3X 11 AR			
C353	4822 124 21983	4.7μF 50V	C451	4822 124 23778	100μF 16V 6.3X 11 AR			
C354	4822 124 41243	2.2μF 50V	C452	4822 124 23778	100μF 16V 6.3X 11 AR			
C355	4822 124 41246	47μF 16V	C453	4822 124 23778	100μF 16V 6.3X 11 AR			
C356	4822 126 11565	CHIP CAP 0.01μF 25V	C454	4822 124 23778	100μF 16V 6.3X 11 AR			
C357	4822 126 11565	CHIP CAP 0.01μF	C470	4822 126 11567	0.022μF +- 10% R 16			
C358	4822 126 11565	CHIP CAP 0.01μF	C471	4822 126 11567	0.022μF +- 10% R 16V			
C359	4822 124 21983	4.7μF 50V	C472	4822 126 11567	0.022μF +- 10% R 16V			
C360	4822 124 21894	10μF 16V	C473	4822 126 11567	0.022μF +- 10% R 16			
C361	4822 126 11565	CHIP,CAP 0.01μF	C476	4822 126 11567	0.022μF +- 10% R 16			
C362	4822 126 11565	CHIP,CAP 0.01μF	C477	4822 126 11567	0.022μF +- 10% R 16			
C363	4822 124 41246	47μF 16V	C478	4822 126 11567	0.022μF +- 10% R 16			
C364	4822 126 11565	CHIP CAP 0.01μF	C479	4822 126 11567	0.022μF +- 10% R 16			
C366	4822 126 11567	CERAMIC.CAP 0.022μF	C480	4822 126 11567	0.022μF +- 10% R 16			
C380	4822 126 11567	CERAMIC CAP 0.022μF	C481	4822 126 11567	0.022μF +- 10% R 16			
C381	4822 126 11567	CERAMIC CAP 0.022μF	C482	4822 126 11567	0.022μF +- 10% R 16			
C401	4822 124 23779	220μF 10V 6.3X 11 AR	C483	4822 126 11567	0.022μF +- 10% R 16			
C402	4822 124 23779	220μF 10V 6.3X 11 AR	C484	4822 126 11567	0.022μF +- 10% R 16			
C403	4822 122 32669	47000pF 50V CHIP	C485	4822 126 11567	0.022μF +- 10% R 16			
C404	4822 122 32669	47000pF 50V CHIP	C486	4822 126 11567	0.022μF +-10% R 16V			
C405	4822 124 23776	100μF 10V 8X11 .5 AR	C487	4822 126 11567	0.022μF +- 10% R 16			
C406	4822 124 23776	100μF 10V 8X11 .5 AR	C488	4822 126 11567	CERAMIC CAP.0.022μF			
C407	4822 122 32669	47000pF	C489	4822 126 11567	CERAMIC CAP 0.022μF			
C408	4822 122 32669	47000pF	C490	4822 126 11567	CERAMIC CAP.0.022μF			
C409	4822 124 23776	100μF 10V 8X11 .5 AR	C491	4822 126 11567	CERAMIC CAP.0.022μF			
C410	4822 124 23776	100μF 10V 8X11 .5 AR						
C411	4822 122 32669	47000pF 50V CHIP						
C412	4822 122 32669	47000pF 50V						
C413	4822 124 23779	220μF 10V 6.3X 11 AR						
C414	4822 124 23779	220μF 10V 6.3X 11 AR						
C415	4822 122 32669	47000pF 50V CHIP						
C416	4822 122 32669	47000pF 50V						
C417	4822 124 23779	220μF 10V 6.3X 11 AR						
C418	4822 124 23779	220μF 10V 6.3X 11 AR						
C419	4822 122 32669	47000pF 50V CHIP						
C420	4822 122 32669	47000pF 50V						
C421	4822 124 23779	220μF 10V 6.3X 11 AR						
C422	4822 124 23779	220μF 10V 6.3X 11 AR						
C423	4822 122 32669	47000pF 50V CHIP						
C424	4822 122 32669	47000pF 50V						
C425	4822 121 43927	150P 50V ECH-R						
C426	4822 121 43927	150P 50V ECH-R						
C427	4822 121 42722	0.001μF, J,M,50V	D302	4822 130 82612	1SS153 NEC			
C428	4822 121 42722	0.001μF, J,M,50V	D303	4822 130 82612	1SS153 NEC			
C429	4822 121 42769	0.0015μF, J,M,50V	D304	4822 130 82612	1SS153 NEC			
C430	4822 121 42769	0.0015μF, J,M,50V	D305	4822 130 82612	1SS153 NEC			
C431	4822 126 11562	100pF (GR39) 50V CHI	D306	4822 130 82612	1SS153 NEC			
C432	4822 126 11562	100pF (GR39) 50V	D307	4822 130 82612	1SS153 NEC			
C433	4822 121 43928	330P 50V ECH-R	D351	4822 130 82612	1SS153 NEC			
C434	4822 121 43928	330P 50V ECH-R	D352	4822 130 82612	1SS153 NEC			
C435	4822 121 43928	330P 50V ECH-R	D353	4822 130 82613	02CZ9.1Z			
C436	4822 121 43928	330P 50V ECH-R	D354	4822 130 82612	1SS153 NEC			
C437	4822 121 42769	0.0015μF, J,M,50V	D355	4822 130 81169	02CZ5.6Y			
C438	4822 121 42769	0.0015μF, J,M,50V	D356	4822 130 80156	SVC203			
C439	4822 126 11562	100pF (GR39) 50V CHI						
								
								

PARTSLIST DIGITAL AUDIO P306 (continued)

 IC4C 4822 209 61494 74HC74 FLAT IC4D 4822 209 62765 74HC258F TAPING IC4E 4822 209 61494 74HC74 FLAT IC4F 4822 209 61494 74HC74 FLAT IC4G 4822 209 12079 74HC153 (FLAT PAC) IC4H 4822 209 62758 1BIT DAC SAA7321 IC4J 4822 209 62758 1BIT DAC SAA7321 IC4K 4822 209 30062 NJM5334M FLAT IC4L 4822 209 30062 NJM5534M FLAT PAC IC41 4822 209 82377 CMOS 74HC00 FLAT TAP IC42 4822 209 61494 74HC74 FLAT IC43 4822 209 61494 74HC74 FLAT IC44 4822 209 62764 74HC164F TAPING IC45 4822 209 62764 74HC164F TAPING IC46 4822 209 62764 74HC164F TAPING IC47 4822 209 62764 74HC164F TAPING IC48 4822 209 62764 74HC164F TAPING IC49 4822 209 62764 74HC164F TAPING	 R354 4822 051 30684 680 Ω +-5% 1/16W R355 4822 051 30392 3.9K Ω +-5% 1/16W R356 4822 051 30829 82 Ω +- 5% 1/16 R357 4822 051 30105 1M Ω +- 5% 1/16 R358 4822 051 30472 4.7K Ω +- 5% 1/16 R365 4822 051 30472 4.7K Ω +- 5% 1/16 R366 4822 051 30472 4.7K Ω +- 5% 1/16 R367 4822 051 30103 10K Ω +- 5% 1/16 R368 4822 100 11372 47K Ω RH0634CS4R TY R369 4822 051 30104 100K Ω +- 5% 1/16 R370 4822 051 30104 100K Ω +- 5% 1/16 R371 4822 116 82487 0 Ω +-5% 1/16W R373 4822 051 30222 2.2K Ω +- 5% 1/16 R374 4822 051 30154 150K Ω +- 5% 1/16 R375 4822 051 30472 4.7K Ω +- 5% 1/16 R376 4822 051 30105 1M Ω +-5% 1/16W R377 4822 051 30105 1M Ω +-5% 1/16W R401 4822 051 30168 1.5 Ω +- 5% 1/4 R402 4822 051 30168 1.5 Ω +- 5% 1/4 R403 4822 051 30168 1.5 Ω +- 5% 1/4 R404 4822 051 30168 1.5 Ω +- 5% 1/4 R405 4822 051 30168 1.5 Ω +- 5% 1/4 R406 4822 051 30168 1.5 Ω +- 5% 1/4 R407 4822 051 30103 10K Ω +- 5% 1/16 R408 4822 051 30103 10K Ω +- 5% 1/16 R409 4822 051 30392 3.9K Ω +- 5% 1/16 R410 4822 051 30392 3.9K Ω +- 5% 1/16 R411 4822 051 30682 6.8K Ω +- 5% 1/16 R412 4822 051 30682 6.8K Ω +- 5% 1/16 R413 4822 051 30392 3.9K Ω +- 5% 1/16 R414 4822 051 30392 3.9K Ω +- 5% 1/16 R415 4822 051 30223 22K Ω +- 5% 1/16 R416 4822 051 30223 22K Ω +- 5% 1/16 R417 4822 051 30103 10K Ω +- 5% 1/16 R418 4822 051 30103 10K Ω +- 5% 1/16 R419 4822 051 30105 1M Ω +- 5% 1/16 R420 4822 051 30105 1M Ω +- 5% 1/16 R421 4822 051 30105 1M Ω +- 5% 1/16 R422 4822 051 30105 1M Ω +- 5% 1/16 R423 4822 051 30103 10K Ω +- 5% 1/16 R424 4822 051 30103 10K Ω +- 5% 1/16 R425 4822 051 30223 22K Ω +- 5% 1/16 R426 4822 051 30223 22K Ω +- 5% 1/16 R427 4822 051 30392 3.9K Ω +- 5% 1/16 R428 4822 051 30392 3.9K Ω +- 5% 1/16 R429 4822 051 30392 3.9K Ω +- 5% 1/16 R430 4822 051 30392 3.9K Ω +- 5% 1/16 R431 4822 051 30682 6.8K Ω +- 5% 1/16 R432 4822 051 30682 6.8K Ω +- 5% 1/16 R433 4822 051 30472 4.7K Ω +- 5% 1/16 R434 4822 051 30472 4.7K Ω +- 5% 1/16 R435 4822 051 30682 6.8K Ω +-5% 1/16W R436 4822 051 30682 6.8K Ω +-5% 1/16W R437 4822 051 30472 4.7K Ω +- 5% 1/16 R438 4822 051 30472 4.7K Ω +- 5% 1/16 R439 4822 051 30682 6.8K Ω +-5% 1/16W R440 4822 051 30682 6.8K Ω +-5% 1/16W R441 4822 051 30472 4.7K Ω +- 5% 1/16 R442 4822 051 30472 4.7K Ω +- 5% 1/16 R443 4822 051 30229 22 Ω +- 5% 1/16 R444 4822 051 30229 22 Ω +- 5% 1/16
 L401 4822 157 62546 4.7UH EL0606 L402 4822 157 62546 4.7UH EL0606 L403 4822 157 62547 CHOKE COIL 820UH L404 4822 157 62547 CHOKE COIL 820UH L405 4822 157 62547 CHOKE COIL 820UH L406 4822 157 62547 CHOKE COIL 820UH	 X-TAL X351 4822 242 73894 11.2896MHZ HC49/U X X352 4822 242 72223 CERALOCK CST4.00MGW
 Q308 4822 130 61541 2SC4116 (TOSHIBA) Q309 4822 130 61541 2SC4116 (TOSHIBA) Q310 4822 130 61553 DTC124EU Q351 4822 130 61438 2SA1005 L.OR K Q352 4822 130 61553 DTC124EU Q353 4822 130 61541 2SC4116 (TOSHIBA) Q354 4822 130 61553 DTC124EU Q355 4822 130 61553 DTC124EU Q356 4822 130 61553 DTC124EU	
 R328 4822 051 30222 2.2K Ω +- 5% 1/16 R329 4822 051 30273 27K Ω +- 5% 1/16 R330 4822 051 30153 15K Ω +- 5% 1/16 R331 4822 051 30222 2.2K Ω +- 5% 1/16 R332 4822 051 30222 2.2K Ω +- 5% 1/16 R333 4822 051 30391 390 Ω +- 5% 1/16 R334 4822 051 30273 27K Ω +- 5% 1/16 R335 4822 051 30153 15K Ω +- 5% 1/16 R336 4822 051 30103 10K Ω +- 5% 1/16 R337 4822 051 30274 270K Ω +- 5% 1/16 R338 4822 051 30274 270K Ω +- 5% 1/16 R340 4822 051 30184 180K Ω +- 5% 1/16 R341 4822 051 30273 27K Ω +- 5% 1/16 R342 4822 051 30472 4.7K Ω +- 5% 1/16 R343 4822 051 30473 47K Ω +- 5% 1/16 R344 4822 051 30103 10K Ω +- 5% 1/16 R345 4822 051 30272 2.7K Ω +- 5% 1/16 R346 4822 051 30103 10K Ω +- 5% 1/16 R347 4822 051 30472 4.7K Ω +- 5% 1/16 R348 4822 051 30472 4.7K Ω +- 5% 1/16 R349 4822 051 30472 4.7K Ω +- 5% 1/16 R350 4822 051 30223 22K Ω +- 5% 1/16 R351 4822 051 30561 560 Ω +-5% 1/16W R352 4822 116 82487 0 Ω +-5% 1/16W R353 4822 051 30103 10K Ω +-5% 1/16W	

PARTSLIST RGB PCB PG06



CG51	4822 122 40297	2pF C CK 50V BLK
CG52	4822 121 41856	0.022μF J.M.50V
CG53	5322 122 31626	100pF J CH 50V
CG55	4822 124 23563	47μF/10V
CG56	4822 122 40588	0.022μF F 25V
CM01	4822 122 40588	0.022μF TP050F223Z 2
CM02	4822 122 40588	0.022μF TP050F223Z T
CM04	4822 124 23563	47μF/10V
CM05	4822 122 40588	0.022μF TP050F223Z T
CM06	4822 124 22324	22μF/16V
CM08	4822 124 22324	22μF/16V
CM09	4822 124 23563	47μF/ 10V
CM11	4822 122 40588	0.022μF TP050F223Z T
CM13	4822 124 22324	22μF/16V
CM14	4822 124 22324	22μF/16V
CM15	4822 124 22324	22μF/16V
CM21	4822 124 22319	100μF/6.3V
CM22	4822 124 22319	100μF/6.3V
CM23	4822 126 11558	CERMIC CAP. 0.1 U
CM24	4822 122 40588	0.022μF TP050F223Z T
CM25	4822 122 40588	0.022μF TP050F223Z T
CM26	4822 122 40589	CERMIC CAP. 0.047
CM27	4822 122 40589	CERMIC CAP. 0.047
CM28	4822 124 22327	0.47μF/ 50V
CM29	4822 126 11558	CERMIC CAP. 0.1 U
CM31	4822 124 23769	4.7μF/ 50V
CM32	4822 124 23771	1μF/50V (BP)
CM34	4822 124 23771	1μF/50V (BP)
CM36	4822 126 11558	CERMIC CAP. 0.1 U
CM37	4822 122 40588	0.022μF TP050F223Z T
CM38	4822 126 10362	22pF 50V
CM39	4822 126 11554	18pF J CH 50V
CM40	4822 126 10362	22pF 50V
CM42	4822 126 11555	24pF J SL 50V
CM43	4822 122 33639	1000pF K B 50V
CM49	4822 122 40588	0.022μF TP050F223Z T
CM50	4822 126 11558	CERMIC CAP. 0.1 U
CM55	4822 124 23563	47μF/ 10V
CM56	4822 124 23563	47μF/ 10V
CM57	4822 122 40588	0.022μF TP050F223Z T
CM58	4822 122 40588	0.022μF TP050F223Z T
CM59	4822 124 23563	47μF/ 10V
CM60	4822 126 11557	4.7pF 50V
CM61	4822 124 23771	1μF 50V (BP)
CM65	4822 124 22324	22μF 16V L5MM
CM66	4822 126 11557	4.7pF K CH 50V
CM71	4822 124 23563	47μF/10V
CM72	4822 124 23563	47μF/10V
CM73	4822 124 23563	47μF/10V
CM74	4822 122 40588	0.022μF F 25V
CM75	4822 122 31219	150pF J SL 50V
CM76	4822 126 11557	4.7pF K CH 50V
CM77	4822 126 10362	22pF J SL 50V
CM78	4822 126 11552	12pF J CH 50V
CM80	4822 124 23563	47μF/10V
CM81	4822 124 23563	47μF/10V
CM84	4822 122 40588	0.022μF F 25V
CM85	4822 122 40588	0.022μF F 25V
CM86	4822 124 22324	22μF/16V
CM87	4822 124 22319	100μF/6.3V
CM88	4822 122 40588	0.022μF F 25V
CM89	4822 122 40588	0.022μF F 25V
CM90	4822 124 22324	22μF/16V
CM91	4822 124 22324	22μF/16V
CM92	4822 124 22319	100μF/6.3V
CM93	4822 122 40588	0.022μF F 25V



CM94	4822 124 22324	22μF/16V
CM95	4822 124 22324	22μF/16V
CM96	4822 122 40588	0.022μF F 25V
CM97	4822 124 23563	47μF/10V
CM98	4822 122 40588	0.022μF F 25V
CM99	4822 122 40588	0.022μF F 25V
CN01	4822 124 23563	47μF/ 10V
CN02	4822 126 11558	CERMIC CAP. 0.1 U
CN03	4822 126 10362	22pF J SL 50V
CN04	4822 122 33638	27pF J SL 50V
CN05	4822 124 22324	22μF/ 16V
CN06	4822 122 40588	0.022μF TP050F223Z T
CN07	4822 126 10364	100pF UP050B101K-A
CN08	4822 126 10364	100pF UP050B101K-A
CN09	4822 126 10364	100pF UP050B101K-A
CN10	4822 122 40588	0.022μF TP050F223Z 2
CN11	4822 124 22319	100μF/6.3V
CN12	4822 122 40588	0.022μF TP050F223Z T
CN13	4822 121 41856	0.022μF J 50V
CN14	4822 121 42727	0.0068μF, K,M,50V,D=9
CN20	4822 126 11558	CERMIC CAP. 0.1 U
CN21	4822 126 11558	CERMIC CAP. 0.1 U
CN22	4822 126 11558	CERMIC CAP. 0.1 U
CN23	4822 126 11558	CERMIC CAP. 0.1 U
CN24	4822 126 11558	CERMIC CAP. 0.1 U
CN25	4822 126 11558	CERMIC CAP. 0.1 U
CN26	4822 126 11558	CERMIC CAP. 0.1 U
CN33	4822 124 22319	100μF/6.3V
CN34	4822 124 22319	100μF/6.3V
CN35	4822 122 40588	0.022μF TP050F223Z T
CN36	4822 122 40588	0.022μF TP050F223Z T
CN41	4822 124 23536	470μF/ 4V
CN42	4822 124 23536	470μF/ 4V
CN43	4822 124 23536	470μF/ 4V
CN45	4822 122 40588	0.022μF TP050F223Z T
CN46	4822 124 23563	47μF/ 10V
CN47	4822 124 22319	100μF/6.3V
CN48	4822 124 22319	100μF/6.3V
CN49	4822 122 40588	0.022μF TP050F223Z T
CN50	4822 122 40588	0.022μF TP050F223Z T
CN51	4822 126 10364	100pF UP050B101K-A
CN52	4822 126 11557	4.7pF K CH 50V
CN53	4822 124 23563	47μF/10V
CN54	4822 126 10362	22pF J SL 50V
CN55	4822 124 23536	470μF/4V
CN56	4822 124 23563	47μF/10V
CN61	4822 126 11552	12pF J CH 50V
CN62	4822 126 10362	22pF J SL 50V
CN64	4822 124 23563	47μF/10V
CN65	4822 124 22324	22μF/16V
CN66	4822 124 22324	22μF/16V
CN67	4822 124 22324	22μF/16V
CN68	4822 124 22324	22μF/16V
CN69	4822 122 40588	0.022μF F 25V
CN70	4822 126 11559	120pF J CH 50V
CN71	4822 122 40588	0.022μF F 25V
CN72	4822 122 40588	0.022μF F 25V
CN73	4822 122 33639	1000pF K B 50V
CN74	4822 126 11558	0.1μF F 50V
CN75	4822 122 40588	0.022μF F 25V
CN76	4822 126 11558	0.1μF F 50V
CN81	4822 126 11552	12pF J CH 50V
CN82	4822 122 31205	47pF J CH 50V
CN83	4822 124 22324	22μF 16V L5MM

PARTSLIST RGB PCB PG06 (continued)

					
DN01	4822 130 33305	1SS176,MA165,1SS254	QM12	4822 130 60839	2SC2458 Y OR GR
DN02	4822 130 33305	1SS176,MA165,1SS254	QM13	4822 130 42715	A608SP,A1048,A1309,A
DN03	4822 130 33305	1SS176,MA165,1SS254	QM14	4822 130 42683	DTC124ES
DN04	4822 130 33305	1SS176,MA165,1SS254	QM15	4822 130 60839	2SC2458 Y OR GR
			QM16	4822 130 42715	A608SP.A1048.A1309.A
FM01	4822 242 80286	4.43MHZ BpF 144-5115	QM90	4822 130 61179	2SD2037 E.F
FM04	4822 242 73898	3.5MHZ LpF	QM91	4822 130 60839	2SC2458 Y OR GR
FM05	4822 242 80285	3.58MHZ BpF 144-5196	QN01	4822 130 60839	2SC2458 Y OR GR
FM07	4822 320 50226	190NSEC DELAY LINE 1	QN11	4822 130 42715	A608SP,A1048,A1309,A
FM08	4822 320 40242	64US DELAY LINE	QN12	4822 130 60839	2SC2458 Y OR GR
FM09	4822 320 50226	190NSEC DELAY LINE 1	QN13	4822 130 60839	2SC2458 Y OR GR
FM10	4822 320 50227	190NSEC DELAT LINE 1	QN51	4822 130 60839	2SC2458 Y OR GR
FM11	4822 320 50226	190NSEC DELAY LINE 1	QN52	4822 130 42715	A608SP.A1048.A1309.A
FM12	4822 320 50227	190NSEC DELAY LINE 1	QN61	4822 130 60839	2SC2458 Y OR GR
FN01	4822 242 73843	DSS306-91-F-223Z NOI	QN62	4822 130 42715	A608SP.A1048.A1309.A
FN61	4822 320 50226	190NSEC DELAY LINE 1	QN71	4822 130 42683	DTC124ES (TP)
FN62	4822 320 50227	190NSEC DELAY LINE 1	QN81	4822 130 60839	2SC2458 Y OR GR
FN63	4822 242 80285	3.58MHZ BpF 144-5196	QN82	4822 130 42715	A608SP.A1048.A1309.A
FN64	4822 242 80286	4.43MHZ BpF 144-5115			
			RG51	4822 116 52256	2.2K Ω J 1/6W
ICM1	4822 209 30057	RGB DECORDER V7021 S	RG52	4822 116 52289	5.6K Ω J 1/6W
ICM2	4822 209 83839	UPD4053BC	RG53	4822 116 52263	2.7K Ω J 1/6W
ICM4	4822 209 63455	NJM2233BD	RG54	4822 100 11471	100K Ω VER.RES.
ICM5	4822 209 63455	NJM2233BD	RM02	4822 116 52228	680 Ω +- 5% 1/6
ICM6	4822 209 30063	REGULATOR -5V	RM06	4822 050 11002	1K Ω +- 5% 1/6
ICN1	4822 209 71835	V7040 SONY	RM07	4822 050 11002	1K Ω +- 5% 1/6
ICN2	4822 209 12422	74HC00 HI-SPEED C-MO	RM09	4822 116 52244	15K Ω J 1/6W
ICN3	5322 209 63116	DUAL MMV TC4538BP	RM10	4822 116 52233	10K Ω J 1/6W
ICN4	4822 209 63183	74HC74	RM11	4822 050 11002	1K Ω +- 5% 1/6
ICN5	4822 209 63471	74HC08 2-INPUT AND G	RM12	4822 100 11426	RH0634CS2R TYPE 470
ICN6	4822 209 83839	UPD4053BC	RM13	4822 116 52226	560 Ω +- 5% 1/6
ICN7	4822 209 63469	UPD6451CX-001 NEC	RM18	4822 116 52233	10K Ω +- 5% 1/6
ICN8	4822 209 63455	NJM2233BD	RM19	4822 116 52233	10K Ω +- 5% 1/6
ICN9	4822 209 12422	74HC00 HI-SPEED C-MO	RM20	4822 050 11002	1K Ω +- 5% 1/6
Misellaneous			RM22	4822 050 11002	1K Ω +- 5% 1/6
JM06	4822 290 81428	EUROCONNECTOR 21P BL	RM23	4822 050 11002	1K Ω +- 5% 1/6
KM01	4822 214 51891	Y/C MODULE TDK HCF00	RM24	4822 100 11426	RH0634CS2R TYPE 470
			RM25	4822 116 52226	560 Ω +- 5% 1/6
LM01	4822 157 62909	LAL02TA220J 22UH	RM28	4822 116 52233	10K Ω J 1/6W
LM11	4822 157 62902	LAL02TA6R8J 6.8UH	RM29	4822 116 52256	2.2K Ω J 1/6W
LM12	4822 157 62924	CHOKE COIL 8.2UH	RM30	4822 116 52284	47K Ω J 1/6W
LN01	4822 157 62922	LAL02TA330J 33UH	RM31	4822 116 52278	390K Ω +- 5% 1/6
LN16	4822 157 62919	LAL02TA101J 100UH	RM32	4822 116 52252	180K Ω +- 5% 1/6
LN61	4822 157 62909	LAL02TA220J 22UH	RM33	4822 116 52233	10K Ω +- 5% 1/6W
LN81	4822 157 62909	LAL02TA220J 22UH	RM34	4822 100 11373	RH0634CS2R TYPE 4.7K
QG51	4822 130 42298	C536,C2458,C3311,C17	RM35	4822 116 52233	10K Ω +-5% 1/6W
QM01	4822 130 60839	2SC2458 Y OR GR	RM36	4822 116 52233	10K Ω +- 5% 1/6W
QM03	4822 130 60839	2SC2458 Y OR GR	RM37	4822 100 11373	RH0634CS2R TYPE 4.7K
QM04	4822 130 60839	2SC2458 Y OR GR	RM38	4822 116 52233	10K Ω +-5% 1/6W
QM05	4822 130 60839	2SC2458 Y OR GR	RM39	4822 116 52222	390 Ω +- 5% 1/6
QM07	4822 130 60839	2SC2458 Y OR GR	RM40	4822 116 52222	390 Ω +- 5% 1/6
QM08	4822 130 42715	2SC536SP,2SC2458,2SC	RM41	4822 116 52263	2.7K Ω +-5% 1/6W
QM09	4822 130 60839	2SC2458 Y OR GR	RM42	4822 100 11426	RH0634CS2R TYPE 470
QM10	4822 130 42715	2SA608SP,2SA1048,2SA	RM43	4822 116 52256	2.2K Ω +- 5% 1/6
QM11	4822 130 42715	A608SP.A1048.A1309.A	RM44	4822 116 52284	47K Ω +- 5% 1/6
			RM45	4822 116 52284	47K Ω +- 5% 1/6
			RM46	4822 116 52233	10K Ω +- 5% 1/6
			RM51	4822 116 52251	18K Ω +- 5% 1/6
			RM52	4822 100 11351	10K Ω RH0634C14R TY
			RM53	4822 116 52249	1.8K Ω +-5% 1/6W
			RM54	4822 100 11426	RH0634CS2R TYPE 470
			RM55	4822 116 52276	3.9K Ω +-5% 1/6W
			RM56	4822 116 52284	47K Ω +-5% 1/6W
			RM57	4822 116 52249	1.8K Ω J 1/6W

PARTSLIST RGB PCB PG06 (continued)



RM58	4822 100 11426	RH0634CS2R TYPE 470
RM59	4822 116 52276	3.9K Ω J 1/6W
RM60	4822 116 52284	47K Ω J 1/6W
RM61	4822 116 52233	10K Ω +- 5% 1/6
RM62	4822 100 11351	10K Ω RH0634C14R TY
RM63	4822 116 52283	4.7K Ω +- 5% 1/6
RM64	4822 116 52244	15K Ω +- 5% 1/6
RM74	4822 116 52283	4.7K Ω J 1/6W
RM75	4822 116 52207	1.2K Ω J 1/6W
RM76	4822 116 52207	1.2K Ω J 1/6W
RM77	4822 116 52224	470 Ω +- 5% 1/6
RM78	4822 116 52224	470 Ω +- 5% 1/6
RM90	4822 116 60307	1 Ω J 1/4W
RM92	4822 116 52222	390 Ω J 1/6W
RM93	4822 116 52175	100 Ω J 1/6W
RM95	4822 116 52271	33K Ω J 1/6W
RM96	4822 116 52233	10K Ω J 1/6W
RM97	4822 116 52243	1.5K Ω J 1/6W
RM98	4822 116 52224	470 Ω J 1/6W
RM99	4822 116 52226	560 Ω J 1/6W
RN01	4822 116 52244	15K Ω J 1/6W
RN02	4822 116 52234	100K Ω +- 5% 1/6
RN03	4822 116 52256	2.2K Ω +- 5% 1/6
RN04	4822 116 52283	4.7K Ω +- 5% 1/6
RN05	4822 050 11002	1K Ω +- 5% 1/6
RN06	4822 116 52211	150 Ω +- 5% 1/6
RN07	4822 050 11002	1K Ω +- 5% 1/6
RN08	4822 116 52211	150 Ω +- 5% 1/6
RN09	4822 050 11002	1K Ω +- 5% 1/6
RN10	4822 116 52211	150 Ω +- 5% 1/6
RN15	4822 116 52284	47K Ω +- 5% 1/6
RN16	4822 116 52277	39K Ω J 1/6W
RN17	4822 116 52257	22K Ω J 1/6W
RN21	4822 116 52233	10K Ω +- 5% 1/6
RN22	4822 116 52233	10K Ω +- 5% 1/6
RN31	4822 111 41355	75 Ω +- 5% 1/6
RN32	4822 111 41355	75 Ω +- 5% 1/6
RN33	4822 111 41355	75 Ω +- 5% 1/6
RN35	4822 116 52219	330 Ω J 1/6W
RN37	4822 116 52175	100 Ω +- 5% 1/6
RN38	4822 116 52224	470 Ω J 1/6W
RN39	4822 111 41355	75 Ω +- 5% 1/6
RN41	4822 116 52256	2.2K Ω +- 5% 1/6
RN42	4822 050 11002	1K Ω J 1/6W
RN44	4822 111 41355	75 Ω +- 5% 1/6
RN45	4822 116 52222	390 Ω +- 5% 1/6
RN46	4822 050 11002	1K Ω +- 5% 1/6
RN47	4822 116 52233	10K Ω +- 5% 1/6
RN48	4822 116 52233	10K Ω +- 5% 1/6
RN49	4822 116 52215	220 Ω J 1/6W
RN50	4822 116 52215	220 Ω J 1/6W
RN51	4822 116 52271	33K Ω J 1/6W
RN52	4822 116 52233	10K Ω J 1/6W
RN53	4822 116 52207	1.2K Ω J 1/6W
RN54	4822 116 52224	470 Ω J 1/6W
RN55	4822 116 52224	470 Ω J 1/6W
RN56	4822 050 11002	1K Ω J 1/6W
RN57	4822 050 11002	1K Ω J 1/6W
RN61	4822 116 52224	470 Ω J 1/6W
RN62	4822 116 52224	470 Ω J 1/6W
RN63	4822 116 52243	1.5K Ω J 1/6W
RN64	4822 116 52228	680 Ω J 1/6W
RN65	4822 050 11002	1K Ω J 1/6W
RN67	4822 050 11002	1K Ω J 1/6W
RN68	4822 116 52228	680 Ω J 1/6W
RN69	4822 116 52228	680 Ω J 1/6W



RN70	4822 050 11002	1K Ω J 1/6W
RN71	4822 116 52283	4.7K Ω J 1/6W
RN75	4822 116 52224	470 Ω J 1/6W
RN76	4822 116 52224	470 Ω J 1/6W
RN77	4822 050 11002	1K Ω J 1/6W
RN78	4822 116 52228	680 Ω J 1/6W
RN80	4822 116 52271	33K Ω J 1/6W
RN81	4822 116 52233	10 Ω J 1/6W
RN82	4822 116 52243	1.5K Ω J 1/6W
RN83	4822 116 52228	680 Ω J 1/6W
RN84	4822 116 52224	470 Ω J 1/6W
RN85	4822 116 52224	470 Ω J 1/6W
RN86	4822 050 11002	1K Ω J 1/6W
RN87	4822 050 11002	1K Ω J 1/6W
RN88	4822 116 52243	1.5K Ω J 1/6W
RN89	4822 116 52228	680 Ω J 1/6W
RN90	4822 050 11002	1K Ω J 1/6W
RN92	4822 050 11002	1K Ω J 1/6W
RN95	4822 050 11002	1K Ω J 1/6W
RN96	4822 050 11002	1K Ω J 1/6W
XM01	4822 242 72593	CRYSTAL RESONATOR HC
XM02	4822 242 72972	HC49/U 3.579545MHZ
ZM90	4822 130 80321	10V

PARTSLIST SERVO PCB P106

					
C101	4822 122 40588	22000pF 25V	C283	4822 126 11554	18pF CERAMIC CAP 50V
C102	4822 122 40588	22000pF 25V	C284	4822 124 23772	1μF/ 50V (BP)
C103	4822 121 42698	0.1μF, J,N,50V	C285	4822 122 40586	10000pF
C104	4822 124 23773	10μF/ 16V (BP)	C286	4822 122 40586	10000pF
C105	4822 122 40586	10000pF 16V	C287	4822 124 21823	22μF/ 25V
C106	4822 122 40586	10000pF 16V	C288	4822 122 40586	10000pF
C107	4822 122 40586	10000pF 16V	C289	4822 124 21823	22μF/ 25V
C108	4822 122 40586	10000pF			
C109	4822 121 42666	0.22μF, J,T,50V	D101	4822 130 33305	1SS176,MA165,1SS254
C110	4822 122 40586	10000pF +-20% 16V	D102	4822 130 33305	1SS176,MA165,1SS254
C111	4822 122 40586	10000pF	D104	4822 130 33305	1SS176,MA165, 1SS25
C112	4822 122 40586	10000pF			
C113	4822 124 23775	0.47μF/ 50V (BP)	IC20	4822 290 60997	HA11529NT (SERVO)
C114	4822 124 23772	1μF/ 50V (BP)	IC21	4822 209 61187	BA15218
C115	4822 121 42723	0.012μF, J,M,50V	IC22	4822 209 61187	BA15218
C116	4822 121 42701	0.018μF, J,M,50V	IC23	4822 209 61187	BA15218
C117	4822 121 42723	0.012μF, J,M,50V	IC24	4822 209 61187	BA15218
C118	4822 121 42666	0.22μF, J,T,50V	IC25	4822 209 61379	CXA1081Q
C119	4822 124 23774	22μF/25V (BP)	IC26	4822 209 83839	UPD4053BC
C120	4822 122 31219	150pF +-5% SL 50V	IC27	4822 209 83654	NJM4556D
C121	4822 126 11557	4.7pF UP050F4R7K 50V	IC28	4822 209 83654	NJM4556D
C122	4822 126 11557	4.7pF UP050F4R7K 50V	IC29	4822 209 61187	BA15218
C131	4822 124 21736	1μF/50V			
C132	4822 121 42698	0.1μF, J,N,50V	Q101	4822 130 42683	DTC124ES(TP)
C133	4822 122 40588	22000pF +-20% 25VF	Q102	4822 130 42683	DTC124ES (TP)
C134	4822 122 40588	22000pF +-20% 25VF	Q103	4822 130 42683	DTC124ES (TP)
C135	4822 122 31197	15pF +-5% SL	Q104	4822 130 42593	DTA124ES (TP)
C151	4822 124 21823	22μF/ 25V	Q105	4822 130 60839	2SC2458 Y OR GR
C152	4822 124 21823	22μF/ 25V	Q106	4822 130 42683	DTC124ES (TP)
C153	4822 122 40586	10000pF 16V	Q108	4822 130 61417	2SB1240 Q,R
C154	4822 122 40586	10000pF 16V	Q110	4822 130 42683	DTC124ES (TP)
C155	4822 124 21823	22μF/ 25V	Q111	4822 130 42683	DTC124ES(TP)
C156	4822 124 21823	22μF/ 25V	Q201	4822 130 62547	STA451C
C157	4822 122 31207	68pF +-5% SL 50V	Q202	4822 130 62547	STA451C
C171	4822 121 42722	0.001μF, J,M,50V	Q281	4822 130 60839	2SC2458 Y OR GR
C172	4822 124 41138	100 μF/10V	Q282	4822 130 60839	2SC2458 Y OR GR
C173	4822 121 42725	0.0027μF, J,M,50V,D=9			
C174	4822 124 23775	0.47μF/ 50V (BP)	RL01	4822 116 52233	10K Ω +- 5% 1/6
C175	4822 121 42773	0.0039μF, J,M,50V	RL02	4822 116 52233	10K Ω +- 5% 1/6
C176	4822 121 41857	0.01μF, J,M,50V	RL03	4822 116 52233	10K Ω +- 5% 1/6
C177	4822 121 42701	0.018μF, J,M,50V	RL04	4822 116 52233	10K Ω +- 5% 1/6
C178	4822 121 42666	0.22μF, J,T,50V	RL05	4822 116 52233	10K Ω +- 5% 1/6
C179	4822 121 42666	0.22μF, J,T,50V	RL06	4822 116 52296	6.8K Ω +-5% 1/6W
C180	4822 122 31207	68pF +-5% SL 50V	R101	4822 116 52233	10K Ω +- 5% 1/6
C181	4822 122 40588	22000pF 25V	R102	4822 116 52233	10K Ω +- 5% 1/6
C182	4822 121 42698	0.1μF, J,N,50V	R103	4822 116 52233	10K Ω +- 5% 1/6
C183	4822 124 23773	10μF/ 16V (BP)	R104	4822 116 52233	10K Ω +- 5% 1/6
C184	4822 121 41856	0.022μF, J,M,50V	R105	4822 116 52269	3.3K Ω +- 5% 1/6
C185	4822 121 42771	0.0022μF, J,M,50V	R106	4822 116 52271	33K Ω +- 5% 1/6
C191	4822 122 40588	0.022 μF 50V	R107	4822 116 52257	22K Ω +- 5% 1/6
C192	4822 126 11071	330pF 50V	R108	4822 116 52245	150K Ω +- 5% 1/6
C193	4822 121 42698	0.1μF, J,N,50V	R109	4822 116 52233	10K Ω +- 5% 1/6
C194	4822 121 42698	0.1μF, J,N,50V	R110	4822 116 52283	4.7K Ω +- 5% 1/6
C195	4822 122 40586	10000pF +-20% 16V Y	R111	4822 116 52284	47K Ω +- 5% 1/6
C196	4822 122 40588	22000pF 25V	R112	4822 116 52284	47K Ω +- 5% 1/6
C197	4822 122 40588	22000pF	R113	4822 116 52269	3.3K Ω +- 5% 1/6
C198	4822 122 40588	22000pF	R114	4822 116 52284	47K Ω +- 5% 1/6
C199	4822 121 42698	0.1μF, J,N,50V	R115	4822 116 52245	150K Ω +- 5% 1/6
C200	4822 122 40588	22000pF	R116	4822 116 52284	47K Ω +- 5% 1/6
C251	4822 122 40588	22000pF +-20% 25V F			
C252	4822 122 40588	22000pF +-20% 25V F			
C253	4822 124 23775	0.47μF/ 50V (BP)			
C254	4822 122 40586	10000pF 16V			
C255	4822 122 40586	10000pF			
C256	4822 122 40586	10000pF +-20% 16V Y			
C281	4822 122 40586	10000pF			
C282	4822 122 40586	10000pF			

PARTSLIST SERVO PCB P106 (continued)



R117	4822 116 52284	47K Ω $\pm$ 5% 1/6
R118	4822 116 52233	10K Ω $\pm$ 5% 1/6
R119	4822 116 52269	3.3K Ω $\pm$ 5% 1/6
R120	4822 116 52233	10K Ω $\pm$ 5% 1/6
R121	4822 116 52245	150K Ω $\pm$ 5% 1/6
R122	4822 116 52207	1.2K Ω $\pm$ 5% 1/6
R123	4822 100 11373	4.7K Ω RH0634CS3R T
R124	4822 100 11373	4.7K Ω RH0634CS3R T
R125	4822 116 52277	39K Ω $\pm$ 5% 1/6W
R126	4822 116 52271	33K Ω $\pm$ 5% 1/6
R127	4822 116 52234	100K Ω $\pm$ 5% 1/6
R128	4822 116 52233	10K Ω $\pm$ 5% 1/6
R129	4822 116 52234	100K Ω $\pm$ 5% 1/6
R130	4822 116 52235	1M Ω $\pm$ 5% 1/6
R131	4822 116 52283	4.7K Ω $\pm$ 5% 1/6
R132	4822 116 52233	10K Ω $\pm$ 5% 1/6
R133	4822 100 11351	10K Ω RH634CJ4R TY
R134	4822 116 52175	100 Ω $\pm$ 5% 1/6W
R135	4822 116 52285	470K Ω $\pm$ 5% 1/6
R136	4822 116 52244	15K Ω $\pm$ 5% 1/6
R137	4822 116 52264	27K Ω $\pm$ 5% 1/6W
R138	4822 116 52207	1.2K Ω $\pm$ 5% 1/6W
R139	4822 116 52264	27K Ω $\pm$ 5% 1/6W
R140	4822 116 52256	2.2K Ω $\pm$ 5% 1/6W
R141	4822 116 52264	27K Ω $\pm$ 5% 1/6W
R142	4822 116 52245	150K Ω $\pm$ 5% 1/6W
R143	4822 116 52231	12K Ω $\pm$ 5% 1/6W
R144	4822 116 52245	150K Ω $\pm$ 5% 1/6W
R145	4822 116 52257	22K Ω $\pm$ 5% 1/6W
R149	4822 116 52283	4.7K Ω $\pm$ 5% 1/6W
R150	4822 116 52297	68K Ω $\pm$ 5% 1/6W
R151	4822 116 52284	47K Ω $\pm$ 5% 1/6
R152	4822 116 60422	2.2 Ω $\pm$ 5% 2W
R153	4822 116 52257	22K Ω $\pm$ 5% 1/6
R154	4822 116 52257	22K Ω $\pm$ 5% 1/6W
R160	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R171	4822 116 52186	22 Ω $\pm$ 5% 1/6
R172	4822 116 52234	100K Ω $\pm$ 5% 1/6
R173	4822 116 52234	100K Ω $\pm$ 5% 1/6
R174	4822 100 11352	22K Ω RH0634CJ4R TY
R175	4822 116 52257	22K Ω $\pm$ 5% 1/6
R176	4822 116 52175	100 Ω $\pm$ 5% 1/6W
R178	4822 100 11386	1K Ω RH634CJ4R TYP
R179	4822 116 52271	33K Ω $\pm$ 5% 1/6
R181	4822 116 52285	470K Ω $\pm$ 5% 1/6
R182	4822 116 52277	39K Ω $\pm$ 5% 1/6W
R183	4822 116 52284	47K Ω $\pm$ 5% 1/6W
R184	4822 116 52269	3.3K Ω $\pm$ 5% 1/6
R185	4822 116 52263	2.7K Ω $\pm$ 5% 1/6W
R186	4822 116 52264	27K Ω $\pm$ 5% 1/6W
R187	4822 116 52245	150K Ω $\pm$ 5% 1/6W
R188	4822 116 52234	100K Ω $\pm$ 5% 1/6W
R189	4822 116 52289	5.6K Ω $\pm$ 5% 1/6W
R192	4822 116 52296	6.8K Ω $\pm$ 5% 1/6W
R193	4822 116 52296	6.8K Ω $\pm$ 5% 1/6W
R194	4822 116 52271	33K Ω $\pm$ 5% 1/6
R195	4822 116 52234	100K Ω $\pm$ 5% 1/6
R196	4822 116 60422	2.2 Ω $\pm$ 5% 2W
R197	4822 116 52251	18K Ω $\pm$ 5% 1/6W
R198	4822 116 52257	22K Ω $\pm$ 5% 1/6
R200	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R201	4822 116 52283	4.7K Ω $\pm$ 5% 1/6W
R211	4822 116 52239	120K Ω $\pm$ 5% 1/6W
R212	4822 116 52257	22K Ω $\pm$ 5% 1/6W
R213	4822 116 52283	4.7K Ω $\pm$ 5% 1/6W
R216	4822 116 52277	39K Ω $\pm$ 5% 1/6W



R217	4822 116 52291	56K Ω $\pm$ 5% 1/6
R218	4822 116 52284	47K Ω $\pm$ 5% 1/6
R219	4822 116 52217	270 Ω $\pm$ 5% 1/6
R220	4822 116 52271	33K Ω $\pm$ 5% 1/6W
R221	4822 116 52258	220K Ω $\pm$ 5% 1/6
R222	4822 116 52257	22K Ω $\pm$ 5% 1/6
R223	4822 116 52233	10K Ω $\pm$ 5% 1/6
R224	4822 116 52257	22K Ω $\pm$ 5% 1/6
R225	4822 116 52271	33K Ω $\pm$ 5% 1/6W
R227	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R228	4822 116 52176	10 Ω $\pm$ 5% 1/6
R229	4822 116 60421	2.2 Ω $\pm$ 5% 1W
R231	4822 116 83036	27 Ω 1/4W $\pm$ 2%
R232	4822 116 83036	27 Ω 1/4W $\pm$ 2%
R233	4822 116 60307	1 Ω J 1/4W $\pm$ 5%
R234	4822 116 60307	1 Ω J 1/4W $\pm$ 5%
R235	4822 116 83036	27 Ω 1/4W $\pm$ 2%
R236	4822 116 83036	27 Ω 1/4W $\pm$ 2%
R237	4822 116 60307	1 Ω J 1/4W $\pm$ 5%
R238	4822 116 60307	1 Ω J 1/4W $\pm$ 5%
R239	4822 116 52175	100 Ω 1/6W $\pm$ 5%
R240	4822 116 52175	100 Ω 1/6W $\pm$ 5%
R241	4822 116 52175	100 Ω 1/6W $\pm$ 5%
R242	4822 116 52175	100 Ω 1/6W $\pm$ 5%
R243	4822 116 52175	100 Ω 1/6W $\pm$ 5%
R244	4822 116 52175	100 Ω 1/6W $\pm$ 5%
R245	4822 116 52175	100 Ω 1/6W $\pm$ 5%
R246	4822 116 52175	100 Ω 1/6W $\pm$ 5%
R251	4822 116 52219	330 Ω $\pm$ 5% 1/6
R252	4822 050 19109	91 Ω $\pm$ 5% 1/6W
R253	4822 116 52234	100K Ω $\pm$ 5% 1/6
R254	4822 116 52233	10K Ω $\pm$ 5% 1/6
R255	4822 100 11471	100K Ω RH0634C15R T
R256	4822 116 52234	100K Ω $\pm$ 5% 1/6
R257	4822 116 52233	10K Ω $\pm$ 5% 1/6
R258	4822 116 52245	150K Ω $\pm$ 5% 1/6W
R259	4822 116 52245	150K Ω $\pm$ 5% 1/6W
R260	4822 116 52285	470K Ω $\pm$ 5% 1/6W
R261	4822 116 52285	470K Ω $\pm$ 5% 1/6W
R262	4822 116 52234	100K Ω $\pm$ 5% 1/6
R263	4822 116 52245	150K Ω $\pm$ 5% 1/6W
R264	4822 116 52233	10K Ω $\pm$ 5% 1/6
R265	4822 116 52285	470K Ω $\pm$ 5% 1/6W
R266	4822 116 52233	10K Ω $\pm$ 5% 1/6
R267	4822 116 52244	15K Ω $\pm$ 5% 1/6W
R268	4822 116 52297	68K Ω $\pm$ 5% 1/6
R269	4822 116 52283	4.7K Ω $\pm$ 5% 1/6
R270	4822 116 52233	10K Ω $\pm$ 5% 1/6
R271	4822 116 52257	22K Ω $\pm$ 5% 1/6
R272	4822 116 52257	27K Ω $\pm$ 5% 1/6W
R274	4822 116 52243	1.5K Ω $\pm$ 5% 1/6
R275	4822 116 52176	10 Ω $\pm$ 5% 1/6
R276	4822 116 60421	2.2 Ω $\pm$ 5% 1W
R285	4822 116 52175	100 Ω $\pm$ 5% 1/6W
R286	4822 100 11386	RH0634CS2R TYPE 1K O
R287	4822 116 52233	10K Ω $\pm$ 5% 1/6
R288	4822 116 52244	15K Ω $\pm$ 5% 1/6
R289	4822 050 11002	1K Ω $\pm$ 5% 1/6W
R290	4822 116 52186	22 Ω 1/6W $\pm$ 5%
R291	4822 116 52283	4.7K Ω $\pm$ 5%



Z101 4822 130 80316 3.6V ZENER

PARTSLIST SYSTEMCONTROL PU 06

 CU01 4822 124 41246 47μF 16V CU02 4822 126 11565 10000pF (GR39) 25V C CU03 4822 126 11565 10000pF (GR39) 25V C CU04 4822 124 41246 47μF 16V CU05 4822 126 11565 10000pF (GR39) 25V C CU06 4822 124 41246 47μF 16V CU07 4822 126 11565 10000pF (GR39) 25V C CU08 4822 124 41242 100μF/ 10V CU11 4822 126 11567 0.022μF +- 10% R 16 CU12 4822 126 11567 0.022μF +-10% R 16V CU13 4822 126 11567 0.022μF +- 10% R 16 CU14 4822 126 11567 0.022μF +- 10% R 16 CU15 4822 126 11567 0.022μF +- 10% R 16 CU16 4822 126 11567 0.022μF +-10% R 16V CU21 4822 126 11567 0.022μF +- 10% R 16 CU22 4822 124 41246 47μF 16V CU23 4822 126 11564 22pF (GR39) 50V CHIP CU24 4822 126 11564 22pF (GR39) 50V CHIP CU25 4822 126 11567 0.022μF +- 10% R 16 CU26 4822 126 11567 0.022μF +- 10% R 16 CU27 4822 126 11563 180pF (GR39) 50V CHI	 RU01 4822 051 30103 10K Ω +- 5% 1/16 RU02 4822 051 30103 10K Ω +- 5% 1/16 RU03 4822 051 30103 10K Ω +- 5% 1/16 RU04 4822 051 30103 10K Ω +- 5% 1/16 RU05 4822 051 30103 10K Ω +-5% 1/16W RU06 4822 051 30473 47K Ω +- 5% 1/16 RU07 4822 051 30104 100K Ω +- 5% 1/16 RU08 4822 051 30103 10K Ω +- 5% 1/16 RU11 4822 051 30473 47K Ω +- 5% 1/16 RU12 4822 051 30472 4.7K Ω +- 5% 1/16 RU13 4822 051 30103 10K Ω +- 5% 1/16 RU14 4822 051 30103 10K Ω +- 5% 1/16 RU16 4822 051 30472 4.7K Ω +- 5% 1/16 RU17 4822 051 30472 4.7K Ω +- 5% 1/16 RU18 4822 051 30103 10K Ω +- 5% 1/16 RU19 4822 051 30102 1K Ω +- 5% 1/16 RU21 4822 051 30223 22K Ω +- 5% 1/16 RU22 4822 051 30223 22K Ω +- 5% 1/16 RU23 4822 051 30101 100 Ω +- 5% 1/16 RU26 4822 051 30222 2.2K Ω +- 5% 1/16 RU27 4822 051 30103 10K Ω +- 5% 1/16 RU28 4822 051 30472 4.7K Ω +- 5% 1/16 RU29 4822 051 30103 10K Ω +- 5% 1/16 RU31 4822 051 30151 150 Ω +- 5% 1/16 RU32 4822 051 30105 1M Ω +- 5% 1/16 RU42 4822 051 30103 10K Ω +-5% 1/16W RU47 4822 116 82487 0 Ω +-5% 1/16W
 DU01 4822 130 82612 1SS153 NEC DU02 4822 130 82612 1SS153 NEC	 XU01 4822 242 72223 CERALOCK CST4.00MGW
 IC71 4822 209 30061 HD63B03YF IC72 4822 209 73856 74HC86FP IC73 4822 209 82377 CMOS 74HC00 FLAT TAP IC74 4822 209 61494 74HC74 FLAT IC75 4822 209 63739 PD0011A 24BIT DEC. IC76 4822 209 73588 64K S-RAM FLAT PAC L IC77 4822 209 30059 MBM27C512P-20 ONE TI IC78 4822 209 63741 CXD1095Q IC79 4822 209 63557 TC7S08F TOSHIBA TAPI IC80 4822 209 82377 CMOS 74HC00 FLAT TAP IC81 4822 209 63341 74HC02 (JEDEC) IC82 4822 209 82377 CMOS 74HC00 FLAT TAP	 Miscellaneous BU01 4822 138 10297 CR2032-IHF
 LU01 4822 152 20651 220UH CHOKE COIL LU02 4822 152 20651 220UH CHOKE COIL QU01 4822 130 61541 2SC4116 (TOSHIBA) QU02 4822 130 61541 2SC4116 (TOSHIBA) QU03 4822 130 61541 2SC4116 (TOSHIBA) QU04 4822 130 61553 DTC124EU	

PARTSLIST POWER SUPPLY P 906

					
CD05	4822 124 23774	22µF/ 25V (BP)	LD01	4822 157 62926	S0627 2.6MH 1A
CD06	4822 124 23774	22µF/ 25V (BP)	LD02	4822 157 62926	S0627 2.6MH 1A
C903	4822 122 32486	0.01µF Z 50V	Relais		
C904	4822 122 32486	0.01µF Z 50V	L902	4822 280 20467	RELAY UB-5MBU
C905	4822 122 32486	0.01µF Z 50V			
C906	4822 122 32486	0.01µF Z 50V	Q901	4822 130 61442	2SD1913 R,S
C907	4822 122 32486	0.01µF Z 50V	Q902	4822 130 61359	2SB1274 R,S
C908	4822 122 32486	0.01µF Z 50V	Q903	4822 130 60839	2SC2458 Y OR GR
C909	4822 122 32486	0.01µF Z 50V	Q904	4822 130 60107	2SA1048 Y OR GR T
C910	4822 122 32486	0.01µF Z 50V	Q905	4822 130 61442	2SD1913 R,S
C911	4822 124 22008	100µF/50V	Q906	4822 130 61359	2SB1274 R,S
C912	4822 124 22008	100µF/50V	Q907	4822 130 61442	2SD1913 R,S
C915	4822 124 22239	3300µF 25V RA2 TYPE	Q908	4822 130 61441	2SD1862 TV-2 NPN Q,R
C916	4822 124 22239	3300µF 25V RA2 TYPE	Q909	4822 130 60107	2SA1048 Y OR GR T
C917	4822 124 21823	22µF/ 25V	Q910	4822 130 62548	2SB1185 E OR F
C918	4822 124 21823	22µF/ 25V	Q913	4822 130 61442	2SD1913 R,S
C919	4822 124 21823	22µF/ 25V	Q914	4822 130 61417	2SB1240 TV-2 PNP Q,R
C920	4822 124 21823	22µF/ 25V	Q915	4822 130 60839	2SC2458 Y OR GR
C921	4822 124 21823	22µF/ 25V	Q916	4822 130 42683	DTC124ES (TP)
C922	4822 124 21823	22µF/ 25V	Q918	4822 130 61441	2SD1862 TV-2 NPN Q,R
C923	4822 124 21823	22µF/ 25V	Q920	4822 130 42683	DTC124ES (TP)
C924	4822 124 21823	22µF/ 25V			
C925	4822 124 22268	4700µF/ 16V	RD01	4822 116 52256	2.2K Ω +- 5% 1/6
C927	4822 124 21823	22µF/ 25V	RD02	4822 116 52244	15K Ω +- 5% 1/6
C928	4822 124 21823	22µF/ 25V	RD03	4822 116 52233	10K Ω +- 5% 1/6
C929	4822 124 21823	22µF/ 25V	RD04	4822 116 52256	2.2K Ω +- 5% 1/6
C930	4822 124 22239	3300 µF 25V RA2 T	RD05	4822 116 52244	15K Ω +- 5% 1/6
C931	4822 124 22239	3300 µF 25V RA2 T	RD06	4822 116 52233	10K Ω +- 5% 1/6
C932	4822 124 21823	22µF 25V	R904	4822 111 90731	47 Ω G 1/4W RADIA
C935	4822 124 21823	22µF 25V	R905	4822 111 90731	47 Ω G 1/4W RADIA
C937	4822 122 32486	0.01µF Z 50V	R907	4822 116 52243	1.5K Ω +- 5% 1/6
C938	4822 122 32486	0.01µF Z 50V	R908	4822 116 52243	1.5K Ω +- 5% 1/6
C941	4822 124 21823	22µF/ 25V	R909	4822 116 52269	3.3K Ω J 1/6W9
C942	4822 124 21823	22µF/ 25V	R910	4822 116 52269	3.3K Ω J 1/6W
C945	4822 124 21823	22µF/ 25V	R911	4822 050 11002	1K Ω +- 5% 1/6
C946	4822 124 21736	1µF/50V	R912	4822 116 52283	4.7K Ω +- 5% 1/6
			R922	4822 116 52175	100 Ω +- 5% 1/6
D901	4822 130 82425	RBA402 4A/200V BRIDG	R923	4822 116 52175	100 Ω +- 5% 1/6
D902	4822 130 33063	SI,DIODE S3V20 (SHIN	R924	4822 116 52175	100 Ω +- 5% 1/6
D903	4822 130 33063	SI,DIODE S3V20 (SHIN	R925	4822 116 52175	100 Ω +- 5% 1/6
D904	4822 130 82421	1D3 1A/200V	R926	4822 116 52283	4.7K Ω +- 5% 1/6
D905	4822 130 82421	1D3 1A/200V	R927	4822 116 52257	22K Ω J 1/6W
D906	4822 130 82421	1D3 1A/200V	R929	4822 116 52233	10K Ω J 1/6W
D907	4822 130 82421	1D3 1A/200V	R931	4822 116 52222	390 Ω +-5% 1/6W
D913	4822 130 82421	1D3 1A/200V	R932	4822 116 52257	22K Ω +-5% 1/6W
D914	4822 130 82421	1D3 1A/200V	R938	4822 116 60307	1 Ω J 1/4W
D915	4822 130 82421	1D3 1A/200V	R939	4822 116 83034	1.8 Ω J 1/4W
D916	4822 130 82421	1D3 1A/200V	R940	4822 116 83034	1.8 Ω J 1/4W
D919	4822 130 33305	1SS176,MA165,1SS254	R942	4822 116 52256	2.2K Ω +- 5% 1/6
D920	4822 130 33305	1SS176,MA165,1SS254	R943	4822 050 11002	1K Ω +- 5% 1/6
D922	4822 130 33305	1SS176,MA165,1SS254	R945	4822 116 81153	4.7 Ω +-5% 2W
D923	4822 130 33305	1SS176,MA165,1SS254	R946	4822 116 83035	27 Ω +-5% 1W
D924	4822 130 33305	1SS176,MA165,1SS254	Z901	4822 130 82423	MTZJ6.8A
D926	4822 130 33305	1SS176,MA165,1SS254	Z902	4822 130 82423	MTZJ6.8A
D929	4822 130 82421	1D3 1A/200V	Z903	4822 130 33759	4.7V ZENER EQUIVALEN
D936	4822 130 82611	RB152 1.5A/200V	Z904	4822 130 82423	MTZJ6.8A669
 FUSE			Z910	4822 130 80623	13V ZENER EQUIVALENT
F901	4822 253 30206	2 A 250V BS LISTED	Z911	4822 130 82609	MTZJ2.0B
F902	4822 253 30206	2 A 250V BS LISTED			
F903	4822 070 31002	1 A 250V BS LISTED	IC86	4822 209 71902	NJM 78L12A
F904	4822 070 31002	1 A 250V BS LISTED	IC87	4822 209 73524	NJM 79L12A
F905	4822 253 30206	2 A 250V BS LISTED			

PARTSLIST SPINELMOTOR DRIVER PD06

Miscellaneous		
	4822 252 20295	THERMAL FUSE
		
CD01	4822 121 43855	0.0033μF, J,M,50V
CD02	4822 121 43855	0.0033μF, J,M,50V
CD03	4822 121 43855	0.0033μF, J,M,50V
CD04	4822 121 43855	0.0033μF, J,M,50V
CD09	4822 122 31218	120pF J SL 50V GRN
CD10	4822 122 31218	120pF J SL 50V GRN
CD13	4822 126 11557	4.7pF +-10% CH 50V
C936	4822 124 41138	100 μF/10V
		
DD01	4822 130 33305	1SS176,MA165,1SS254
DD02	4822 130 33305	1SS176,MA165,1SS254
DD03	4822 130 33305	1SS176,MA165,1SS254
DD04	4822 130 33305	1SS176,MA165,1SS254
DD05	4822 130 33305	1SS176,MA165,1SS254
DD06	4822 130 33305	1SS176,MA165,1SS254
DD07	4822 130 82422	EK16 1.5A/S.B.D
DD08	4822 130 82422	EK16 1.5A/60V S.B.D
DD09	4822 130 82422	EK16 1.5A/60V S.B.D
DD10	4822 130 82422	EK16 1.5A/60V S.B.D
DD52	4822 130 33305	1SS176,MA165,1SS254
D925	4822 130 33305	1SS176,MA165,1SS254
D928	4822 130 33305	1SS176,MA165,1SS254
LD03	4822 526 10543	ZBF503AR-00(TA)
LD04	4822 526 10543	ZBF503AR-00(TA)
		
QD01	4822 130 60886	2SC1923 Y
QD02	4822 130 61438	2SA1005 L OR K
QD03	4822 130 60886	2SC1923 Y
QD04	4822 130 61438	2SA1005 L OR K
QD05	4822 130 60107	2SA1048 Y OR GR T
QD06	4822 130 60839	2SC2458 Y OR GR
QD07	4822 130 60107	2SA1048 Y OR GR T
QD08	4822 130 60839	2SC2458 Y OR GR
QD09	4822 130 62548	2SB1185 E OR F
QD10	4822 130 62549	2SD1762 E OR F
QD11	4822 130 62548	2SB1185 E OR F
QD12	4822 130 62549	2SD1762 E OR F
Q911	4822 130 60839	2SC2458 Y OR GR
Q912	4822 130 60839	2SC2458 Y OR GR
		
RD07	4822 116 52269	3.3K Ω +- 5% 1/6
RD08	4822 116 52256	2.2K Ω +- 5% 1/6
RD09	4822 116 52269	3.3K Ω +- 5% 1/6
RD10	4822 116 52256	2.2K Ω +- 5% 1/6
RD11	4822 116 52233	10K Ω +- 5% 1/6
RD12	4822 050 11002	1K Ω +- 5% 1/6
RD13	4822 116 52233	10K Ω +- 5% 1/6
RD14	4822 050 11002	1K Ω +- 5% 1/6
RD15	4822 116 52195	47 Ω +-5% 1/6W
RD16	4822 116 52195	47 Ω +-5% 1/6W
RD17	4822 116 52195	47 Ω +-5% 1/6W
RD18	4822 116 52195	47 Ω +-5% 1/6W
RD51	4822 116 52233	10K Ω +-5% 1/6W
RD54	4822 116 52233	10K Ω +-5% 1/6W
R913	4822 116 52222	390 Ω +- 5% 1/6
R914	4822 116 52175	100 Ω +- 5% 1/6
R915	4822 116 52283	4.7K Ω +- 5% 1/6
R916	4822 116 52283	4.7K Ω +- 5% 1/6
R930	4822 116 52257	22K Ω +- 5% 1/6
		
Z907	4822 130 80316	3.6V ZENER EQUIVALEN

PARTSLIST SAFETY PCB PD06

		
CD51	4822 121 43855	0.0033μF, J,M,50V
CD52	4822 121 42698	0.1μF, J,N,50V
CD53	4822 124 41138	100μF/10V
CD54	4822 122 40586	10000pF Y 16V
CD55	4822 122 40586	10000pF Y 16V
CD56	4822 124 41138	100μF/10V
		
DD51	4822 130 33305	1SS176,MA165,1SS254
		
IC88	4822 209 63184	74HC86 EX-QR
IC89	4822 209 12422	74HC00 NAND
		
QD51	4822 130 42593	DTA124ES (TP)
		
RD52	4822 116 52234	100K Ω +-5% 1/6W
RD53	4822 116 52233	10K Ω +-5% 1/6W
RD55	4822 116 52234	100K Ω +-5% 1/6W
RD56	4822 116 52233	10K Ω +-5% 1/6W
RD57	4822 116 52234	100K Ω +-5% 1/6W
RD58	4822 116 52233	10K Ω +-5% 1/6W
RD59	4822 116 52234	100K Ω +-5% 1/6W
RD60	4822 116 52233	10K Ω +-5% 1/6W
RD61	4822 116 52233	10K Ω +-5% 1/6W
RD62	4822 116 52233	10K Ω +-5% 1/6W
RD63	4822 116 52296	6.8K Ω +-5% 1/6W
RD64	4822 116 52233	10K Ω +-5% 1/6W
RD65	4822 050 11002	1K Ω +-5% 1/6W
RD66	4822 116 52284	47K Ω +-5% 1/6W
RD67	4822 116 52233	10K Ω +-5% 1/6W
RD68	4822 116 52175	100 Ω +-5% 1/6W
		
ZD51	4822 130 33759	4.7V ZENER EQUIVALEN
ZD52	4822 130 33759	4.7V ZENER EQUIVALEN

POWERSUPPLY DIG. AUDIO P926

		
C951	4822 124 23782	3300μF 16V 16X 25 AR
C952	4822 124 23778	100μF 16V 6.3X 11 AR
C953	4822 124 23783	470μF 16V 10X12.5 AR
C955	4822 122 32486	0.01μF Z 50V
C956	4822 122 32486	0.01μF Z 50V
		
D951	4822 130 82421	1D3 1A/200V
D952	4822 130 82421	1D3 1A/200V
 Fuse		
F951	4822 253 30206	2 A 250 V BS LISTED
		
Q951	4822 130 61442	2SD1913 R,S
		
R951	4822 116 52176	10 Ω +-5% 1/6W

TRANSFORMER PCB P916

	C901	4822 122 33276	DE7150 F 103M 0.01μF
	C902	4822 122 33276	DE7150 F 103M 0.01μF
	L901	4822 157 62918	LINE FILTER μF2327S-
	T901	4822 146 21633	POWER TRANSFORMER

FRONT PCB PU06

	CF01	4822 124 21823	22μF/25V
	CF02	4822 122 40586	10000pF 16V
	CF03	4822 122 40586	10000pF 16V
	IC99	4822 209 63457	FRONT CPU TMP47C670N
	LF01	4822 157 62898	LAL02TA181J 180UH
	QF01	4822 130 60839	2SC2458 Y OR GR9
	QF02	4822 130 60107	2SA1048 Y OR GR T
	RF01	4822 116 52256	2.2K Ω +- 5% 1/6
	RF02	4822 116 52257	22K Ω +- 5% 1/6
	RF03	4822 116 52257	22K Ω +- 5% 1/6
	RF04	4822 050 11002	1K Ω +- 5% 1/6
	RF05	4822 050 11002	1K Ω +- 5% 1/6
	SF02	4822 276 20508	TACT SWICH ALPS-SKHV
Miscellaneous			
SF03	4822 276 20508	TACT SWICH ALPS-SKHV	
SF04	4822 276 20508	TACT SWICH ALPS-SKHV	
SF05	4822 276 20508	TACT SWICH ALPS-SKHV	
SF20	4822 276 20508	TACT SWICH ALPS-SKHV	
SF21	4822 276 20508	TACT SWICH ALPS-SKHV	
SF22	4822 276 20508	TACT SWICH ALPS-SKHV	
SF23	4822 276 20508	TACT SWICH ALPS-SKHV	
SF25	4822 276 20508	TACT SWICH ALPS-SKHV	
K001	4822 130 90999	LCD UNIT	
 X-tal			
XF01	4822 242 73893	6MHz CERAMIC RESONAT	

PARTSLIST STANDBY PCB PF 16

	CF04	4822 122 40586	10000pF 16V
	DF01	4822 130 80326	LT3D8B RED 30
	DF02	4822 130 80326	LT3D8B RED 30
	DF03	4822 130 33305	1SS176,MA165,1SS254
	QF03	4822 130 42683	DTC124ES (TP)
	QF04	4822 130 42683	DTC124ES (TP)
	RF07	4822 116 52217	270 Ω +-5% 1/6W
	RF08	4822 116 52243	1.5K Ω +- 5% 1/6
	RF09	4822 116 52243	1.5K Ω +- 5% 1/6W
	RF11	4822 116 52233	10K Ω +-5% 1/6W
Miscellaneous			
SF01	4822 276 20508	TACT SWICH ALPS-SKHV	
SF26	4822 276 20508	TACT SWICH ALPS-SKHV	
SF27	4822 276 20508	TACT SWICH ALPS-SKHV	
 X-tal			
ZF01	4822 130 81254	GP1U520X 36.0KHZ IR-	

PARTSLIST LDP600 SERVICETOOLS

4822 397 30244	NTSC TESTDISC 12"
4822 395 90896	TEST STAND
4822 395 80389	SPINDLE MOTOR JIG.
4822 321 61071	EXT. CABLE 3P.
4822 321 61072	EXT. CABLE 11P.
4822 321 61073	EXT. CABLE 12P.

3.1 SAFETY INSTRUCTIONS

- Safety regulations demand that the set be restored to its original condition and that components identical with the original types be used.
Safety components are marked by the symbol .

- ESD



All IC's and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.
For detailed information see "Handling ESD-sensitive components".

- A set to be repaired should always be connected to the mains via a suitable isolating transformer.
- never replace any modules or any other parts while the set is switched on.
- Use plastic instead of metal alignment tools. This in order to prelude short-circuit or to prevent a specific circuit form being rendered unstable.

3.2 SERVICING OF SMDs (Surface Mounted Devices)

3.2.1 General cautions on handling and storage

- Oxidation on the SMDs terminals results in poor soldering. Do not handle SMDs with bare hand.
- Avoid for storage places that are sensitive to oxidation such as places with sulfur or chlorine gas, direct sunlight, high temperatures or a high degree of humidity.
As a result the capacitance or resistance value of the SMDs may be affected.
- Rough handling of circuit boards containing SMDs may cause damage to the components as well as the circuit boards. Circuit boards containing SMDs should never be bent or flexed. Different circuit board materials expand and contract at different rates when heated or cooled and the components and/or solder connections may be damaged due to the stress.
Never rub or scrape chip components as this may cause the value of the component to change. Similarly, do not slide the circuit board across any surface.

3.2.2 Removal of SMDs

- Heat the solder (for 2-3 seconds) at each terminal of the chip. Small components can, by means of litz wire and a limited horizontal force, be removed with the soldering iron. They can also be removed with a solder sucker (see Fig. 1a) or
- While holding the SMD with a pair of tweezers take it off gently using the soldering iron's heat applied to each terminal (see Fig. 1b).
- Remove the excess solder on the solder lands by means of litz wire or a solder sucker (see Fig. 1c).

3.2.2.1 Caution on removal:

- When handling the soldering iron, use suitable pressure and be careful.
- When removing the chip, do not use undue force with the pair of tweezers.
- The soldering iron to be used (approx. 30 W), must preferably be provided with a thermal control (soldering temperature about 225 to 250°C).
- The chip, once removed, must **never** be used again.

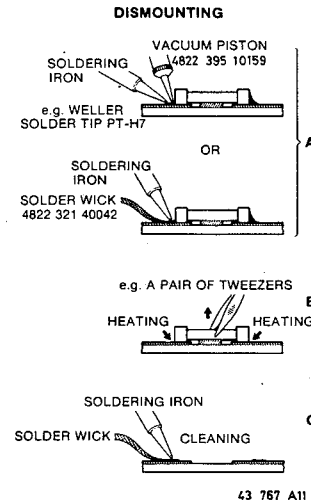


Fig. 1

3.2.3 Attachment of SMDs

- Locate the SMD on the solder lands by means of tweezers and solder the component at one side. Ensure that the component is positioned well on the solder lands (see Fig. 2a).
- Next complete the soldering of the terminals of the component (see Fig. 2b).

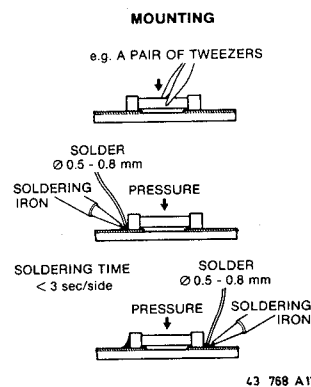


Fig. 2

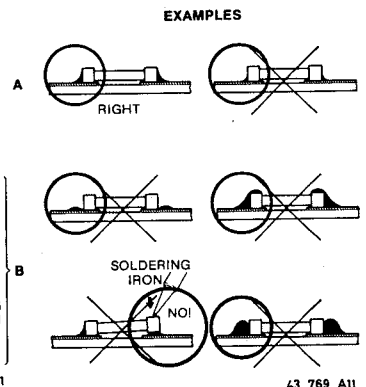


Fig. 3

3.2.3.1 Caution on attachment:

- When soldering the SMD terminals, do not touch them directly with the soldering iron. The soldering must be as quick as possible; care must be taken to avoid damage to the terminals and the body itself.
- Keep the SMD's body in contact with the printed board when soldering.
- The soldering iron to be used (approx. 30 W) must preferably be provided with a thermal control (soldering temperature about 225 to 250°C).
- Soldering should not be done outside the solder land.
- Soldering flux (of rosin) may be used but should not be acidic.
- After soldering, let the SMD cool down gradually at room temperature.
- The quantity of solder must be proportional with the size of the solder land. If the quantity is too great, the SMD might crack or the solder lands might be torn loose from the printed board (see Fig. 3).

3.3 HANDLING ESD-SENSITIVE COMPONENTS

3.3.1 Personal safety

The testing, handling and replacing of ESD-sensitive components requires special attention for personal safety. A person dealing with ESD-sensitive components should, normally speaking, be connected via a resistance to the same potential as the chassis of the set to protect him against direct contact with the supply voltage.

This resistance is often applied in the connection lead of wrist wraps. If necessary, make use of an isolating transformer.

3.3.2 Storage and transport

Transport and store the circuits and PCBs in their original packages.

As an alternative to the original package one may use a conductive material or special IC package which short-circuits all the pins of the component with one another.

Always discharge the package before opening it.

3.3.3 Testing or handling

Work on a conductive surface when testing loose circuits and components or when transferring components and circuits from one package to another.

Use a conductive wrist wrap with lead to make an electrical connection between the conductive surface and yourself via a resistance in the connection lead of the wrist wrap.

Connect equipment and tools also with this conductive surface.

Do not connect any signals to inputs as long as the power supply of the set to be tested is off.

All the inputs that are not used should be connected either to ground or to the supply voltage. When testing, do not use any freon sprays for under-cooling of sensitive components.

3.3.4 Mounting ESD-sensitive components

Mount ESD-sensitive components only after all other components have been mounted.

Make sure that the components themselves, the metal parts of the PCB, mounting equipment and mounting operator are at the same potential level as the chassis of the set.

If it is impossible to ground the PCB, the mounting operator should pick the PCB up before bringing it into contact with the components to be replaced.

3.3.5 Soldering

Soldering iron tips, also those of low-voltage soldering stations, should be kept at the same potential as the components and the PCB.

It is better to use solder-removing braid than solder suckers.

3.3.6 Electrostatic charges

One should stick to the precautionary measures also after the ESD-sensitive components have been mounted on the PCB. Until the sub-PCBs have been incorporated into a complete system on which the correct supply voltages are connected, the PCB is nothing more than an extension of the conductors of the components on this PCB. To prevent electrostatic discharges from passing to the components via the terminals, we recommend that you apply conductive clips or conductive tape on the terminals of the PCB.

3.3.7 Transients (switch-on phenomena)

To prevent permanent damages as a result of switch-on phenomena, no ESD-sensitive components, or PCBs populated with these components, should be inserted in or removed from test-sockets or systems with the supply voltage on.

Prevent switching peaks on the mains as a consequence of switching electric equipment, relay and DC lines on and off.

3.3.8 Working environment

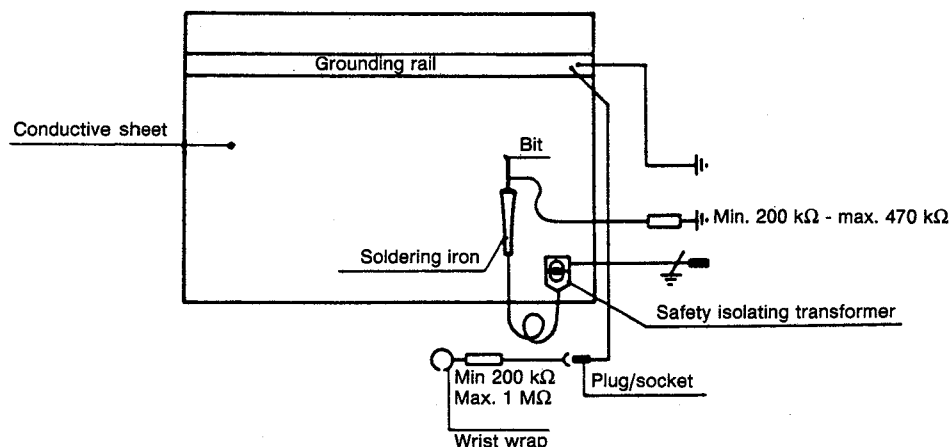
The work bench for the service technician should look like the one shown in the figure.

3.3.9 Replacement of the Flat Pack IC's

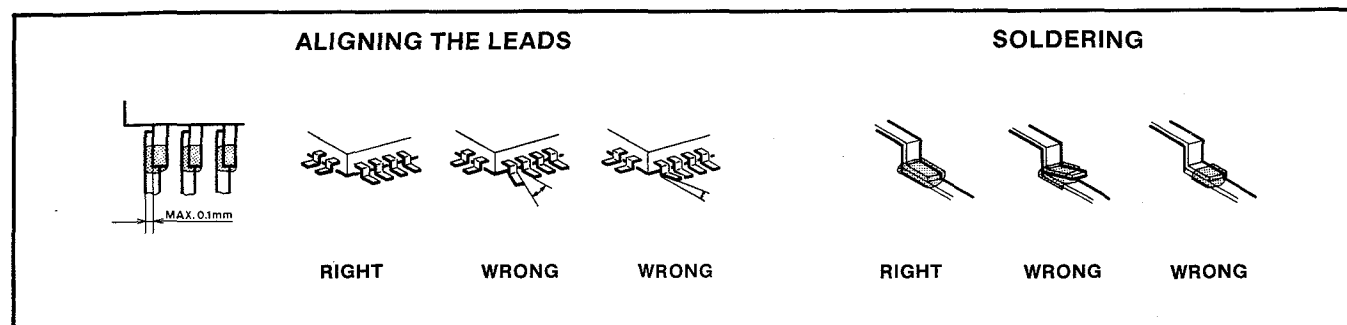
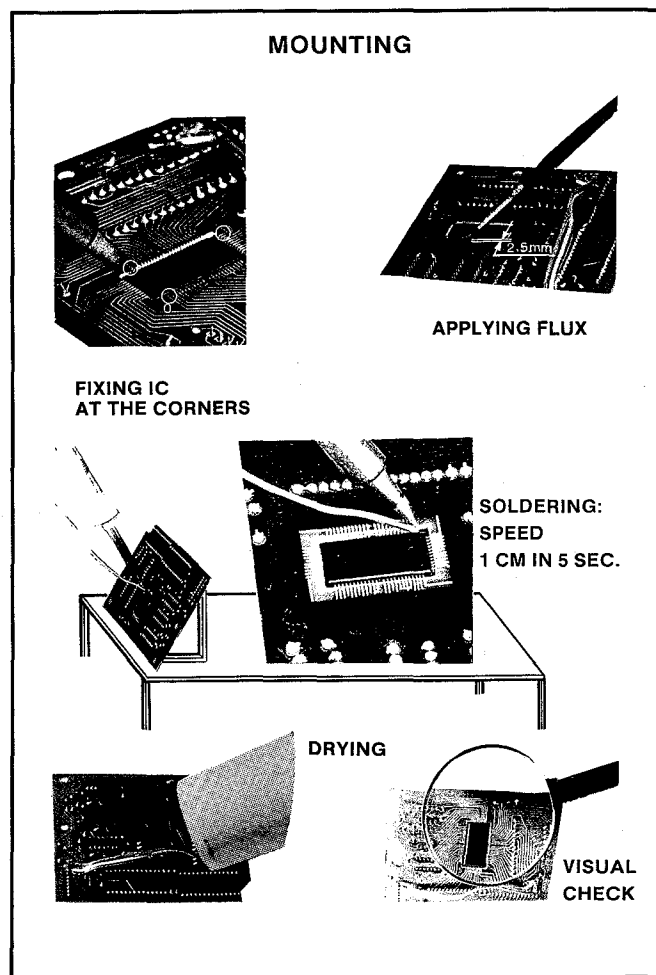
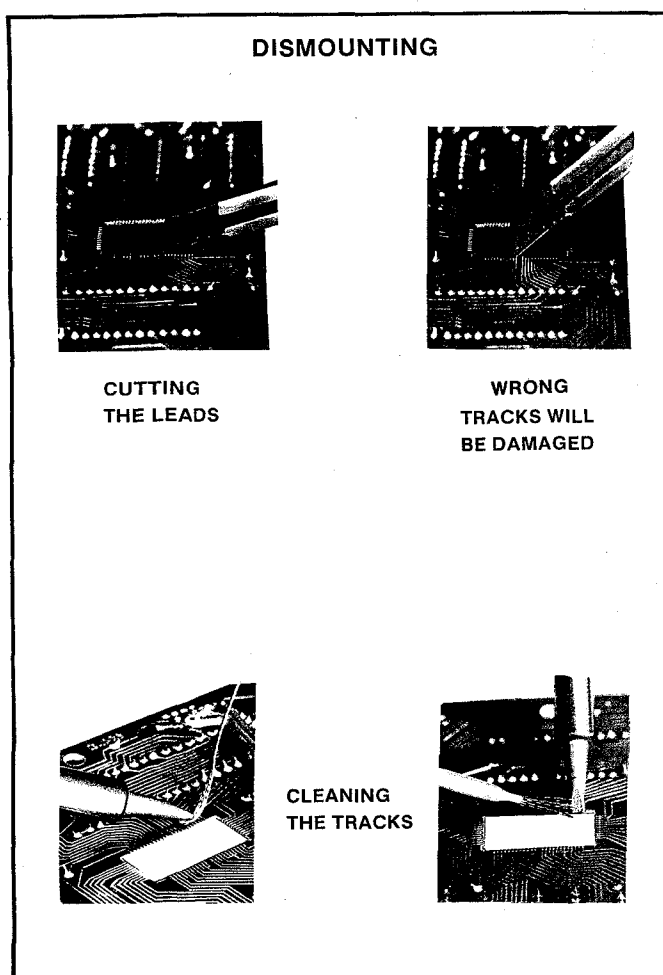
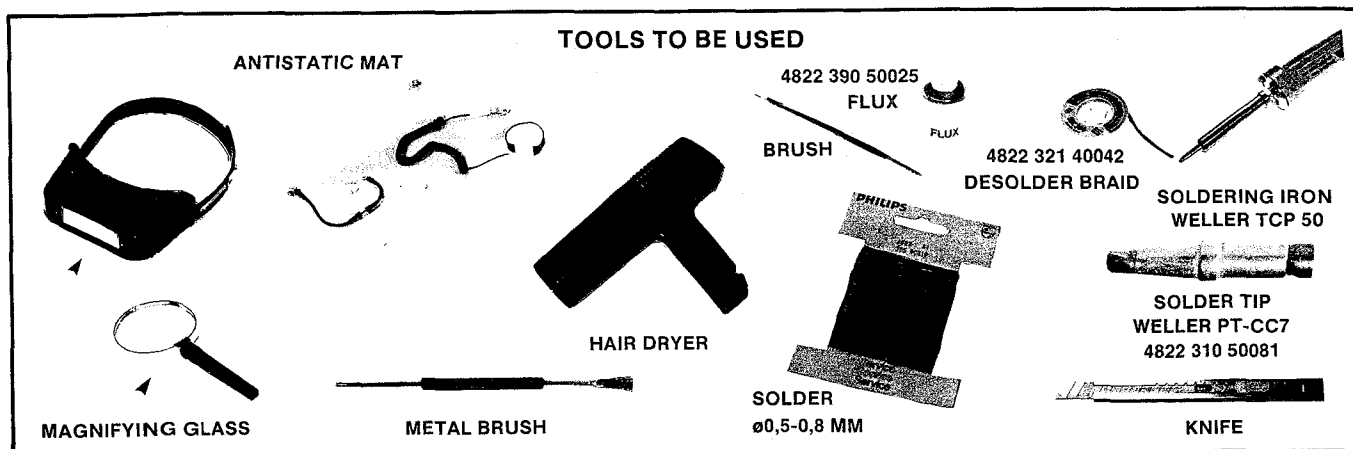
For replacing a component see Fig. 6 Dismounting and Mounting. Also a number of precautions and examples is given.

When replacing a flat pack, rosin flux applied to the device leads will ensure a good soldered joint. Since rosin flux, when not properly heated by the soldering process, is sticky, it will attract dust which will result in component degeneration over a period of time.

The removal of excess flux with a cleaner will not solve this problem because the flux is then even spread over a greater area by the cleaner. Drying of the flux can be accomplished by blowing the area with a common hair dryer for 1 or 2 minutes at a distance of approx. 10 centimeters.



Special attention should be paid in regions having a dry atmosphere and when the floor is covered with a nylon carpet or such.



Service
Service
Service

Service & Support IMS

Service Information

D/A CONVERTER MODIFICATION.

Reason:

Reason:
Change to SAA7321GP-M5 because the production of DAC (IC4H, IC4J) SAA7321GP-M3 used on the digital audio circuit (P306) is stopped.

Situation:

		old situation	new situation	
IC4H	}	SAA7321GP-M3	SAA7321GP-M5	4822 209 30706
IC4J				

When the SAA7321GP-M3 is replaced by the SAA7321GP-M5, the following parts are added and/or changed.

Situation:

	old situation	new situation	
C433 } C436 }	330PF 50V	Film Cap. 560PF 50V	5322 122 32336
	added		
C496 } C498 }	addition	Ceramic Cap. 0.1μF 50V	4822 126 12873

Introduction

The above countermeasure is implemented from the following lot.

<u>model</u>	<u>applied lot for countermeasure</u>
LDP600WS	25 lot ~

The service code is changed from MZ04 to MZ05.

Note

Note
You can confirm service code and lot No. by serial No. on the player rear panel.

Serial No.:MZ XXXX XXXX

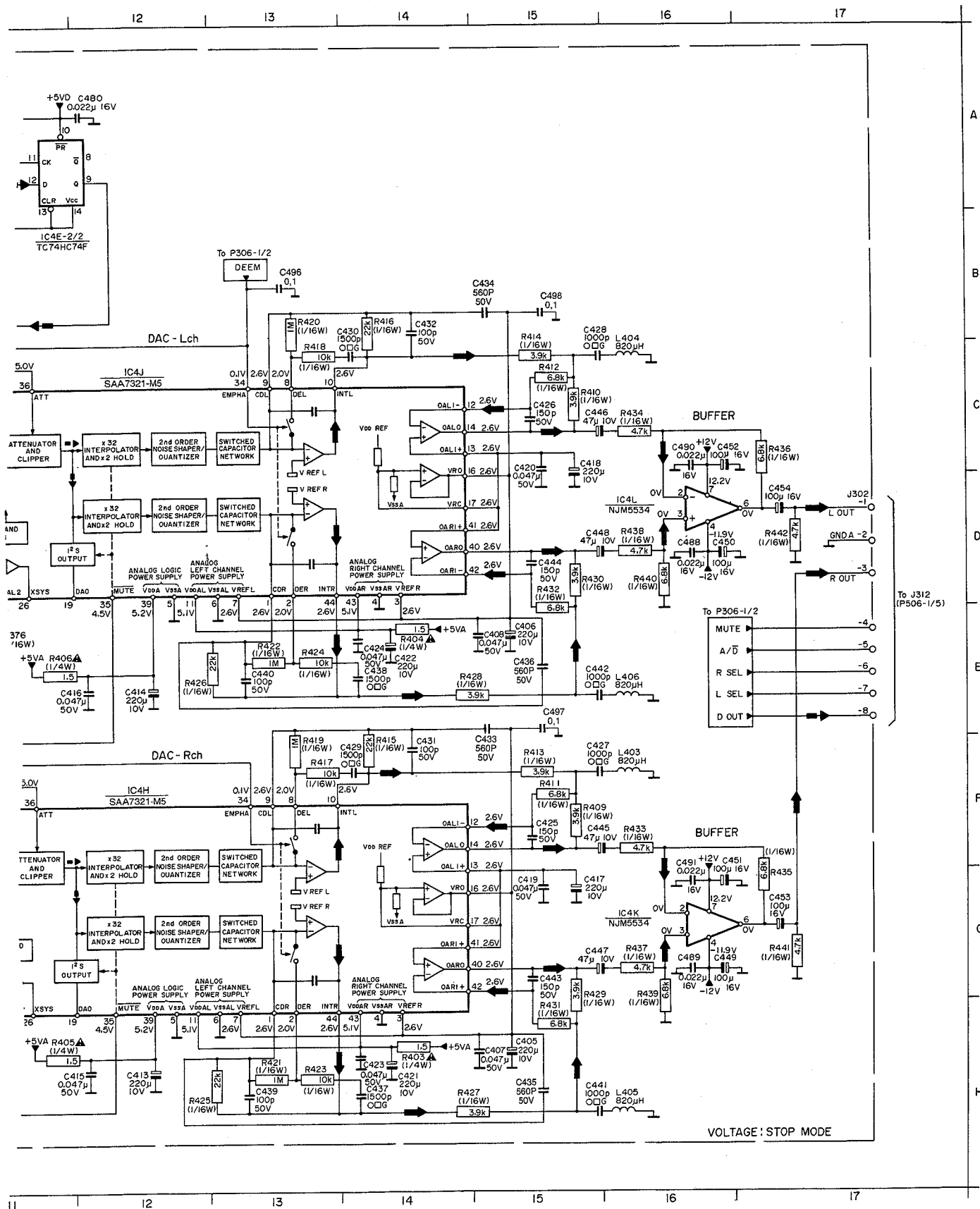
lot No.

service code

Already published Service informations for this model;

- | | | |
|-----|--------|--|
| IMS | 92-003 | Ringling noise modification |
| IMS | 92-006 | Mechanism modification |
| IMS | 92-008 | Modification CCD-IC |
| IMS | 92-009 | Software modification for single side discs. |

P306-2/2 DIGITAL AUDIO P.C.BOARD



P306 DIGITAL AUDIO P.C.BOARD

